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Nortel Networks Symposium Call Center Server

Installation and Maintenance Guide for Windows 2003

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PRELIMINARY

NORTEL NETWORKS™

Nortel Networks Symposium Call Center Server

Installation and Maintenance Guide for Windows 2003

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The Preliminary 2.01 issue of the *Nortel Networks Symposium Call Center Server Installation and Maintenance Guide for Windows 2003* for Release 5.0 is released.

Contents

Chapter 1

Getting started

In this chapter

Overview

Introduction

This chapter describes what Symposium Call Center Server does, and provides guidelines on how to use this guide.

The *Symposium Call Center Server Installation and Maintenance Guide for Windows 2003* provides information and procedures to help you complete the following tasks:

- understanding the requirements for a Symposium Call Center Server Release 5.0 server platform
- connecting external or peripheral hardware components
- configuring the Windows Server 2003 (Enterprise or Standard) operating system
- installing and configuring pcAnywhere
- installing the server software
- installing the client software
- upgrading the server software from 4.x to 5.0 and migrating a database from a Release 4.x or 5.0 installation
- reinstalling the server and client software
- uninstalling the server and client software
- installing and uninstalling Performance Enhancement Packages (PEPs) and Service Update packs
- starting and stopping the server
- managing security on the server
- monitoring events on the server
- backing up and restoring data
- using server utilities
- troubleshooting server problems

This chapter introduces Symposium Call Center Server and describes how the call center components interact with each other.

Who should read this guide

This guide is intended for

- Nortel installers and distributors who are responsible for installing and maintaining Symposium Call Center Server, or upgrading from an earlier release of Symposium Call Center Server to Release 5.0
- administrators who are responsible for monitoring and maintaining the server

Access rights

This guide assumes that you have the privileges and access rights required to perform the procedures in this guide. For more information, refer to the *Administrator's Guide*.

Optional features

Some of the features described in this guide are optional. To give you access to features, Nortel supplies a keycode, which you use when installing the Symposium Call Center Server software. Fields and commands for features that you did not purchase are not available.

About Symposium Call Center Server

Introduction

Symposium Call Center Server provides a call center solution for varied and changing business requirements by offering a suite of applications that includes:

- call processing
- agent handling
- management and reporting
- networking (for Meridian 1 PBX/Nortel Communication Server 1000 systems only)
- third-party application interfaces

Symposium Call Center Server uses a client/server architecture, which distributes call routing and management capabilities among processors to make the best use of system resources.

Components

Symposium Call Center Server uses a client/server architecture, with functionality distributed among various components. The major components of Symposium Call Center Server include

- **the server computer**—Responsible for functions such as the logic for call processing, call treatment, call handling, call presentation, and the accumulation of data into historical and real-time databases. This server computer runs under Windows Server 2003 (Enterprise or Standard).
- **the client** —A graphical user interface to the server. Client computers are used to administer the server and to monitor call center performance. Nortel offers two versions of the client software:
  - Symposium Web Client application—This web-based client application provides a means to configure the server and monitor call center performance through a web-based interface.
  - Symposium Call Center Server client application (Classic client)
- **the switch**—Provides telephony services and voice network connectivity.

- **front-end IVR system**—(Optional) Provides voice processing capabilities.
- **third-party applications**—(Optional) Use information from the server to provide information on screens ("screen pops") or produce customized reports.

Supported switches

Symposium Call Center Server supports the following switches:

- Meridian 1 PBX (M1) nodal and networking
- Nortel Communication Server 1000 nodal and networking
- Digital Multiplex Switch (DMS)
- Meridian Stored Logic 100 (SL-100)
- Succession 2000
- Nortel Communication Server 2100

Notes:

- In all instances in this guide, the M1 switch refers to both the Meridian 1 PBX switch and Meridian 1 PBX Internet Enabled switch, unless otherwise noted.
- The Nortel Communication Server 1000 switch only supports networking over ISDN trunks.

How to use this guide and where to start

Introduction

This guide covers topics such as installing all components of Symposium Call Center Server, upgrading or migrating the server software, backing up and restoring data, and maintaining the server.

This guide includes a detailed table of contents and an index to help you find specific information or procedures related to server installation and maintenance. The "Getting starting" section focuses only on the most common tasks. If the task you want to perform is not listed here, use the table of contents or index to find the information you need.

Where to start in this guide

The following table provides some pointers on where to start for common procedures:

If you want to do this	Start here
Find out the server requirements for Release 5.0 of Symposium Call Center Server	Chapter 3, "Standalone server requirements," on page 52, or "Coresident server requirements" on page 58.
Perform a new installation of Symposium Call Center Server	Chapter 3, "Preparing the server for your installation."
Upgrade from Release 4.0 to 5.0 on the same server	Chapter 7, "Upgrading from Release 4.0 to 5.0 on the same server."
Upgrade from Release 4.0 to 5.0 to a different server	Chapter 8, "Upgrading from Release 4.0 to 5.0 on a new server."
Upgrade from Release 4.2 to 5.0 on same server	Chapter 9, "Upgrading from Release 4.2 to 5.0 on the same server."
Upgrade from Release 4.2 to 5.0 to a different server	Chapter 10, "Upgrading from Release 4.2 to 5.0 on a new server."

If you want to do this	Start here
Migrate a Release 5.0 installation to a new platform	Chapter 11, "Migrating a Release 5.0 server to a new platform."
Back up your server's database	Chapter 19, "Backing up data."
Recover your server	Chapter 20, "Restoring data." This chapter provides several options for recovering your server when you encounter problems.

Related documents

This section lists the documents in which you can find additional information about Symposium Call Center Server.

If you need information about	Refer to
■ the DMS switch	*Nortel Networks Symposium Call Center Server Symposium, DMS, and Voice Processing Guide*
■ the Meridian 1 PBX switch	*Nortel Networks Symposium Call Center Server Symposium, M1/ Succession 1000, and Voice Processing Guide*
■ Symposium Web Client	*Nortel Symposium Web Client Planning, Installation, and Administration Guide*
■ TAPI 3.0	*Network Manager's Guide for Symposium TAPI Service Provider for Succession, Release 3.0.*
■ detailed historical reports	*Nortel Networks Symposium Call Center Server Historical Reporting and Data Dictionary*
■ scripting	*Nortel Networks Symposium Call Center Server Scripting Guide*
■ administering the Network Control Center	*Nortel Networks Symposium Call Center Server Network Control Center Administrator's Guide*
■ operating system requirements	*Symposium Portfolio Server And Operating System Requirements (available on the Partner Information Center web site)*

If you need information about	Refer to
■ Microsoft hotfixes compatibility	*Symposium Service Packs and Security Hotfixes Compatibility List (available on the Partner Information Center web site)*
■ planning and engineering guidelines	*CapTool User's Guide* *Nortel Networks Symposium Call Center Server Planning and Engineering Guide*

Part 1

Installing Symposium Call Center Server

Chapter 2

Installation overview

In this chapter

Prerequisites

This guide is intended for planners, administrators, technicians, and engineers responsible for installing and maintaining the server. It assumes that the reader has basic computing skills, is familiar with necessary safety procedures, and has the hardware documentation provided by the manufacturer available as a reference.

Use the following checklist to make sure you have the prerequisites to install Symposium Call Center Server Release 5.0:

Prerequisites	Guidelines	✔
Required skills	Before installing the hardware and software for Symposium Call Center Server Release 5.0, make sure that you have the prerequisite skills. Refer to "Skills you need" on page 31 for more information.	
Required hardware	Make sure you have the required hardware and materials before starting the installation. Refer to "Standalone server requirements" on page 52, or "Coresident server requirements" on page 58, to ensure you have the proper equipment and materials for a successful installation.	
Understanding the components in Symposium Call Center Server Release 5.0.	Make sure you understand the required software components and server's configuration (such as disk partitioning) before proceeding with your installation. Refer to Chapter 2, "Installation overview" and Section A: "Server guidelines" on page 45 for more information.	

Skills you need

Introduction

This section describes the skills and knowledge you need to use this guide effectively.

Required experience or knowledge

You require detailed knowledge of, and experience with, the applicable Microsoft Windows Server 2003 operating system, since step-by-step procedures for operating system installation and configuration are not provided in this guide.

Other types of experience or knowledge that may be useful include

- client/server architecture
- Internet Protocol (IP)
- database management
- programming

What's included in Symposium Call Center Server

The Symposium Call Center Server Release 5.0 is packaged as a software solution only; no hardware platforms are included. The package includes the following software:

- Release 5.0 Server Application CD-ROM containing
  - Symposium Call Center Server installation software
  - Preinstallation Compliancy Checker utility
- Release 5.0 Server Supplementary CD-ROM containing any additional software components required for Symposium Call Center Server to operate, such as Service Update packs and PEPs
- Release 4.0 Client Application CD-ROM (which includes Adobe Acrobat Reader)
- Release 5.0 Documentation CD-ROM
- Release 11.x pcAnywhere Host-Only CD-ROM (NTJK08BA)
- Symposium Web Client

Installing a Network Control Center server

When Symposium Call Center Server sites are connected together in a Wide Area Network (WAN), they require a central, non-call-processing computer to control the network. This computer is known as the Network Control Center (NCC) server. All servers in Symposium Call Center Server are connected to the NCC server, which may be in the same physical location as one of the servers in the network.

This guide explains how to configure a server computer running Windows Server 2003 (Enterprise or Standard) for Release 5.0 of Symposium Call Center Server. If you are configuring an NCC server, you can use the procedures in this guide to install and configure the NCC server. However, the NCC server does not have an Embedded LAN (ELAN) card installed. Ignore all references to ELAN installation and configuration in the installation procedure.

Note: The NCC server must be installed on a standalone server; it cannot coreside with Symposium Web Client on one server.

Installing a standalone server

What is a standalone server?

A standalone server is a single hardware platform that contains the following application:

- Symposium Call Center Server

In a standalone server, no other application (for example, Symposium Web Client) coresides on the same hardware platform.

What are the requirements for a standalone server?

A standalone server requires lower hardware specifications than a coresident server. For a detailed listing of the minimum hardware specifications for a coresident server, see "Standalone server requirements" on page 52.

Installing a coresident server

What is a coresident server?

A coresident server is a single hardware platform that is shared by one of the following combinations of applications:

- Symposium Call Center Server and Symposium Web Client
- Symposium Call Center Server, Symposium Web Client, and TAPI 3.0

You can install a coresident server if you are using any of the following applications on a Windows Server 2003 platform:

- Symposium Call Center Server Release 5.0 Rev. 4 CD-ROM or later
- Symposium Call Center Server SU04 or later
- Symposium Call Center Web Client Release 4.5 CD-ROM or later
- Symposium Call Center Web Client SU04 or later
- TAPI 3.0 PEP 3006 or later (if applicable)

What are the requirements for a coresident server?

A coresident server requires higher hardware specifications than a standalone server. For a detailed listing of the minimum hardware specifications for a coresident server, see "Coresident server requirements" on page 58.

Installation order

When you are installing coresident applications, the installation order is very important. You must always install the applications in the following order:

1. Symposium Call Center Server software
2. Symposium Web Client
3. TAPI (if applicable)

During the Symposium Call Center Server installation, a new window appears prior to running the preinstallation checker, asking you whether the installation is standalone or coresident. If you select coresident, then you must select the applications that you will be installing after Symposium Call Center Server (Symposium Web Client only, or Symposium Web Client and Communication Control ToolKit). Your selection in this window changes the installation program accordingly.

Installation tips

When you are performing a coresident installation, you must have on hand the installation CD for each program because you will be prompted to insert each CD during the installation:

Follow the installation and configuration tips in the appropriate document for each software program.

- For information on installing and configuring Symposium Call Center Server, see the *Nortel Symposium Call Center Server Installation and Maintenance Guide.*
- For information on Symposium Web Client, follow the installation and configuration procedures for *Nortel Symposium Call Center Web Client Planning, Installation, and Administration Guide.*
- For information on installing and configuring TAPI, see the *Network Manager's Guide for Symposium TAPI Service Provider for Succession, Release 3.0.*

When installing the chosen software, first install the Symposium Call Center Server software from the Symposium Call Center Server application CD. Once the installation is complete, the installation program then prompts you to insert the Symposium Web Client application CD into the server.

Note: You must install the Symposium Web Client application on drive C on your computer. The supported Service Updates for SWC in a coresident scenario are SU04 or later. The minimum requirement for TAPI is TAPI 3.0 (PEP 3006).

When you are finished installing Symposium Web Client, and if you are *not* installing TAPI, the system prompts you to restart the server. However, if you *are* installing TAPI, then it prompts you to insert the TAPI application CD.

Adding to a domain

If your coresident server consists of Symposium Call Center Server and Symposium Web Client, add the server to a domain *after* installing Symposium Web Client. Note that you are only required to add the server to a domain when installing TAPI on your coresident server. Add the server to a domain *after* you have installed TAPI.

Note: Aside from the specific installation order described above, there are no other changes required to merge the different applications on one server. All existing limitations for a standalone installation of each application are equally applicable to the applications installed in a coresident configuration.

Remote access support and coresidency

If you require remote technical support, your distributor or Nortel technical support staff must be able to connect to your server(s). The most secure way of doing this is by means of a Virtual Private Network (VPN). While many VPN technologies and configurations are available, for the purpose of Remote Support of Enterprise-voice equipment, Nortel is prepared to support a standard with a technology based on the Contivity 1100 (as a minimum) in a particular host-to-gateway configuration.

This section provides guidelines for this standardized VPN Remote-Support configuration. A VPN solution is recommended for both Symposium Call Center Server in a standalone mode and when configured in a coresident solution (with Symposium Web Client or with Symposium Web Client and TAPI).

Remote support over a direct-connect modem

If VPN is not available, then it is also possible to provide remote support over a direct-connect modem (however, many enterprises view this as a security risk).

To facilitate remote support by means of a direct-connect modem the following is required:

- modem connected to each Symposium Call Center Server
- Remote Access Services (RAS) configured on each server

Note: Due to the Operating System's communication-layer issues, the Symposium Web Client and the TAPI cannot be configured to use RAS (and thereby the direct-connect modem) for remote-support.

Therefore, for Symposium Call Center Server configured in a coresident solution with Symposium Web Client (or Symposium Web Client and TAPI), and where VPN access is not available, then the direct-connect modem access may be used by means of an external RAS device on the data-network. Some examples are:

- a corporate RAS Server with modem to the PSTN and a connection to the LAN
- a desktop PC with modem to the PSTN (RAS enabled), and a connection to the LAN
- a third-party remote-maintenance product with modem to the PSTN and a connection to the LAN

With the proceeding alternatives, the end-user assumes the responsibility for setup on their premises and the risks to their equipment associated with this pass-through type of connection.

Remote support in a Virtual Private Network

In some enterprises, an unsecured modem attached directly to a server is viewed as a security risk. Rather than using a modem and RAS, these enterprises prefer to use a Virtual Private Network (VPN) solution. Many VPN technologies, and configurations within the technologies, are available. To facilitate remote support, Nortel recommends a technology based on the Contivity 1100 (as a minimum) in a host-to-gateway configuration.

When creating your VPN for remote support, follow these guidelines:

- Create a dedicated subnet for Nortel voice application servers, and treat this subnet as mission-critical. (It is a good network engineering practice, even in a non-VPN environment, to optimize network traffic by grouping servers that need to communicate with each other on a subnet.)
- Install, at a minimum, Nortel's Contivity 1100, version 4.8 or later, with the modem option. Configure the modem as a user tunnel to listen on the PSTN.
- Connect the Contivity VPN Switch to the Nortel Server Subnet.

- Configure Contivity, as well as any network routers and firewalls, to give inbound remote support users unrestricted access to the Nortel application servers.
- Optionally, restrict remote support users' access to other subnets of your LAN/WAN. As usual, make sure that the Nortel application servers have unrestricted access to the enterprise LAN/WAN.
- If you must connect the ELAN to the CLAN (for example, if you are using a networked OTM environment), take the additional precaution of configuring the network router to allow *only* OTM-related traffic, ftp traffic, rlogin traffic, and SNMP traffic through into the ELAN.
- Activate Split Tunneling on the Contivity VPN Switch. Concerns over access into the corporate network may be alleviated by restricting access of remote support staff from other subnets upon login.

See the *Planning and Engineering Guide* for more details on setting up a Remote Support VPN for your Symposium Call Center Server.

Coresidency and your network

When you have the networking feature enabled, and one Symposium Call Center Server is coresident with the Symposium Web Client application server, then you can only use this Symposium Web Client application server to administer the Symposium server with which it resides. This is because the administration of other non-coresident Symposium servers puts an additional load on the CPU of the coresident server (which may impact the call centeroperation).

If ADAM replication is enabled on the coresident Symposium Web Client application server, then this server shares Symposium Web Client data with all other replication-enabled Symposium Web Client ADAM instances in your network. For example, if you have a standalone Symposium Web Client application server that has a number of Symposium servers configured on it, then when this server replicates with a coresident application server, all Symposium servers are also visible on the coresident application server. However, even though the coresident Symposium Web Client application server displays these multiple Symposium servers, you can use it only to administer the Symposium server with which it resides.

A further consideration is the extra bandwidth usage of coresident Symposium Web Client application servers that have multiple Symposium servers configured on them. Each Symposium Web Client application server (both standalone and coresident) receives multicast data from each Symposium server on the network. This multicast data is then consolidated and retransmitted out to the network, which can result in duplicate multicast data being sent out over the network.

On a coresident Symposium Web Client application server that is not replicating, Nortel recommends that you configure only the coresident Symposium Call Center Server that it will be administering. This configuration minimizes the amount of multicast data that is retransmitted by Symposium Web Client onto the network by using the multicast filtering feature. This feature allows Symposium Web Client to transmit only multicast data for the configured Symposium Call Center Server. You must note, however, that this is not possible in a scenario where replication is enabled and there is more than one Symposium Call Center Server configured on any of the replicating Symposium Web Client application servers.

Multiple language support

On coresident servers that contain Symposium Call Center Server, Symposium Web Client, and TAPI, the only supported language version of the Windows Server 2003 operating system is English.

The following language versions of the Windows Server 2003 operating system are supported if the coresident server contains only Symposium Call Center Server and Symposium Web Client:

- English
- Japanese
- Traditional Chinese

Applying patches

When you apply a patch or a Service Update to a coresident server, always refer to the readme file that accompanies the new software for instructions on installing the update and, in particular, guidelines on whether a server restart is required. The impact of the upgrade for the coresident system is always documented in the readme file.

Backing up and restoring a coresident server

To keep data synchronized between Symposium Call Center Server and Symposium Web Client on a coresident server, you must ensure that whenever you back up one application, you also back up the other *at the same time*. You can schedule an online backup on the Symposium Call Center Server and separately schedule a Symposium Web Client online backup to run at the same time.

Nortel does not provide a single backup utility that lets you back up and restore a coresident server. However, you can use a third-party backup solution to perform a full backup and restore of a coresident server. You must first take the server offline before performing a backup using a third-party utility.

Converting a standalone server to a coresident server

If you have a standalone installation and you want to convert it to a coresident server, you cannot install Symposium Web Client on top of a standalone installation. This is because the registry entries and system requirements for a coresident installation differ from a standalone installation.

To convert a standalone installation to a coresident server, you must first perform a platform migration of the standalone server. Back up the database, uninstall the server software, and then install the Symposium Call Center Server software on the original server, making sure you select "upgrade" instead of "new installation." Then, make sure you select the coresident option when installing Symposium Call Center Server. For more information on how to do a platform migration, see Chapter 11, "Migrating a Release 5.0 server to a new platform," on page 765.

Chapter 3

Preparing the server for your installation

In this chapter

Overview

Introduction

This chapter provides guidelines for preparing your server for installing Symposium Call Center Server (either in a standalone or coresident setup), and shows you how to install the necessary hardware for Symposium Call Center Server.

Assumptions

This chapter assumes the following:

- Your hardware platform is a Windows Server 2003 configured for use with Symposium Call Center Server.
- The switch is correctly installed, operational, and configured for use with Symposium Call Center Server.
- All client PCs are operational and running one of the following versions of Windows:
  - Windows 2000 Professional
  - Windows XP Professional
- All client PCs are using Microsoft TCP/IP.
- The Customer Local Area Network (CLAN) and the Embedded Local Area Network (ELAN) are installed and operational.

Section A: Server guidelines

In this section

Overview

This section shows you how your server should be configured for Symposium Call Center Server to run properly. It includes descriptions of the following elements:

- approved peripherals
- operating system
- pcAnywhere
- disk partitioning
- requirements for troubleshooting and maintenance
- RAID controller
- dependencies and compliance

Approved peripherals

The following peripherals are necessary to allow the server to work properly:

Keyboard, monitor, and mouse

The server does not support headless operation; therefore, a keyboard, monitor, and mouse must be connected to the server.

Floppy drive

One floppy drive is required in the server. You need the floppy drive for some software installation and related procedures.

CD-ROM drive

One CD-ROM drive is a minimum standard requirement for the server. You need this drive for software installation and configuration procedures.

Tape drive

If you plan to back up the database to tape rather than to a remote directory, one tape drive is required for the server. You need this drive to save and store the database backup.

SCSI drives

SCSI hard drives in primary and secondary hot-pluggable drive bays are recommended for redundancy. A Redundant Array of Independent Disks (RAID) arrangement combines two or more drives for fault tolerance and performance.

Modem

For standalone installations, a dial-up modem must be connected to the server through a serial port at the rear of the chassis. You can also use a USB modem that is connected to the USB interface. For coresident installations, do not install a modem, and do not enable remote access service.

Note: Instead of using a dial-up modem, you can use Virtual Private Network tunneling instead. See the *Nortel Networks Symposium Call Center Server Planning and Engineering Guide* for information on configuring a VPN.

Network interface cards

Two Ethernet network interface cards are required—one for connection to the Embedded Local Area Network (ELAN), and the other for connection to the Customer Local Area Network (CLAN).

Note: An ELAN card is not required for an NCC.

Release 5.0 hardware requirements

Introduction

Symposium Call Center Server Release 5.0 is a software-only product. The customer supplies the server and all hardware.

Materials

Check that you have the following materials before starting the installation:

- (optional) blank tape for database backup procedures (used with Symposium Call Center Server procedures)
- equipment log (records the model and serial number of the system, all installed options, and other information)
- Microsoft Windows Server 2003 (Enterprise or Standard) CD-ROM (other versions of Windows Server 2003 are not supported)
- The latest service pack for Windows Server 2003 that has been validated with Symposium Call Center Server
- pcAnywhere software version 11.0.1—supplied (provides remote access by Nortel service)

Hardware platforms

Symposium Call Center Server Release 5.0 supports hardware that meets the minimum requirements as described in "Standalone server requirements" on page 52, or "Coresident server requirements" on page 58 of this chapter, regardless of the manufacturer. The server must also meet the requirements of Microsoft's Hardware Compatibility List for the applicable Windows Server 2003 operating system. See Microsoft's web site for details.

Platform Compliance Check

To check whether a particular server meets these basic requirements for Platform Vendor Independence, the Preinstallation Compliancy Checker utility checks your system when you run the Symposium Call Center Server installation program. The Preinstallation Compliancy Checker utility generates warnings and suggestions when the server under test does not satisfy the minimum or suggested requirements.

Note: The Preinstallation Compliancy Checker utility does not check all requirements for Platform Vendor Independence. You must ensure that the server meets all requirements in "Standalone server requirements" on page 52, or in "Coresident server requirements" on page 58.

Nortel platforms no longer supported

You cannot use any Nortel platforms for Release 5.0 of Symposium Call Center Server because they cannot meet the minimum requirements for Platform Vendor Independence. These servers include

- 701t servers
- 702t servers
- 1000t servers
- 1001t servers
- 1003t servers

High Availability Platforms

Symposium Call Center Server is also supported on any High Availability Platform that has undergone compatibility testing with Symposium Call Center Server as part of Nortel's Compatibility Test Program. (For more details on this compatibility test program, see www.nortelnetworks.com/prd/dpp/).

Nortel has successfully completed testing on some of the High Availability Platforms offered by Stratus. Specific details of the High Availability Platforms that are compatible with Symposium Call Center Server are available on request from Nortel in a platform-specific product bulletin.

For more information on Stratus, go to www.stratus.com.

Backup and disaster recovery

To maximize Symposium Call Center Server uptime, ensure that your hardware platform supports your disaster recovery program. Regular system backups are critical to a disaster recovery program. (For more information about system backups, see Chapter 19, "Backing up data.") By provisioning your platform with fault-tolerant hardware (that is, RAID), you can provide additional redundancy for your system. To use the Symposium Standby Server feature, see Appendix C, "Using Symposium Standby Server," on page 1201.

Tape drive requirements

- Use a SCSI tape drive listed on the Microsoft Compatibility List for Windows Server 2003 on the Microsoft web site. Ensure that the SCSI ID for the tape drive does not conflict with existing SCSI IDs configured for other server devices.

  You can use 1/4-inch cartridge and 4-mm and 8-mm digital audio (DAT) format drives.

  The drive can be internal or external to the server.
- The drive must be large enough to hold all the backup data for the complete database on a single backup tape. (Hardware compression techniques can be used if necessary.) To calculate backup space requirements, see "Calculating the capacity requirements for database backups" on page 1008.
- The tape driver must be Sybase-compatible.
- The drive must be capable of operating under Windows Server 2003 (Enterprise or Standard). All hardware devices must be on the Microsoft Hardware Compatibility List for the applicable Windows Server 2003 operating system. For a complete list of compatible hardware devices, see the Microsoft web site.

Standalone server requirements

For Release 5.0 of Symposium Call Center Server to run properly in a standalone configuration, the customer-supplied server must meet the following minimum requirements:

Note: Nortel recommends that you meet the recommended settings. The actual requirements for a call center vary depending on the number of agents, call rate, and other factors. To identify the platform that meets the capacity requirements of your call center, use the Capacity Assessment Tool, available from the Partner Information Center web site.

Hardware item	Minimum	Recommended	Notes
CPU	Intel-based CPU, Pentium III 733 MHz	Intel-based CPU, XEON 2 GHz	▪ Supported processors include Pentium III, Pentium IV, Intel Xeon, Intel Xeon DP, Xeon MP, and PIII Quad processors. ▪ Nortel does not support Pentium II, Intel Celeron, Intel Itanium (IA 64). ▪ Use the Symposium Capacity Tool to ensure your server meets the requirements of your call center.
RAM	512 Mbytes	1 Gbyte	Check the specific requirements for your call center using the *Planning and Engineering Guide*.

Hardware item	Minimum	Recommended	Notes
Hard drive	20 Gbytes physical disk space	40 Gbytes logical disk space (80 Gbytes physical disk space with RAID-1)	Nortel recommends RAID-1 for all disks on the shared SCSI bus to eliminate disk drives as a potential single source for hardware failures. Use the Symposium Capacity Tool to ensure your server meets the requirements of your call center.
Hard disk partitioning	1 physical drive	1 hard drive for the operating system and Symposium Call Center Server software Another hard drive for the database partitions	Separate physical disks provide more reliability and ease of recovery in case of disk failure. **Note:** Minimum partition size for logical drive C is 2 Gbytes. If the RAM is greater then 512 Mbytes, increase your drive C partition to 2 Gbytes + 1.5 X RAM. This is to allow additional space for the system paging file. For additional information on hard disk partitioning, refer to "Disk partitioning requirements" on page 66.
Hard disk type	SCSI bus for hard drives	SCSI bus for hard drives	IDE drives not supported (Recommended) Use RAID 1 hardware for all disks on the shared SCSI bus to eliminate disk drives as a potential single source for hardware failures.

Hardware item	Minimum	Recommended	Notes
Number of hard disks	1 physical drive	1 hard drive for the operating system and Symposium Call Center Server software Another hard drive for the database partitions	In case of disk failure, separate physical disks provide more reliability and ease of recovery.
Hard disk speed	Hard drive speed of 7200 rpm (minimum) from manufacturer's specifications	Hard drive speed of 7200 rpm or higher, from manufacturer's specifications	Release 5.0 supports Windows basic disk partitioning and dynamic disk volumes; however, dynamic disk expansion is not supported.
Floppy drive	1 floppy drive	1 floppy drive	The drive letter must be A.
CD-ROM	1 CD-ROM drive	1 DVD-ROM drive	The drive letter must be E. Minimum speed is 24X.

Hardware item	Minimum	Recommended	Notes
Serial ports	1 serial port (for modem access) or USB Port (if using USB Modem)	1 serial port (for modem access) or USB Port (if using USB Modem)	Optional serial ports, as follows: ■ If you are using a modem for remote support, rather than a virtual private network (VPN), you require 1 serial port, configured as COM1; if you are using a USB modem, you require a USB port. ■ If you are using Symposium Voice Services on Meridian Mail, you require an additional serial port, configured as COM2. ■ If you use a smart UPS that requires an additional serial port on the server platform, you also need the additional serial port. **Note:** For COM1, set the base I/O Port Address to 3F8 and the IRQ to 4.

Hardware item	Minimum	Recommended	Notes
Parallel port	Not required if connecting to M1 For DMS/SL-100, one parallel port must be physically configured on the server and enabled through the BIOS for the security dongle (you can also use the serial or USB port for the security dongle)	Not required if connecting to M1 For DMS/SL-100, one parallel port must be physically configured on the server and enabled through the BIOS for the security dongle (you can also use the serial or USB port for the security dongle)	
Network interface	2 network interface cards	2 network interface cards	ELAN must be 10/100 Mbps (Ethernet) CLAN should be 100 Mbps (Ethernet)
Video card	1 video card and monitor	1 video card and monitor	800x600 minimum resolution
Mouse	1 mouse	1 mouse	
Modem	1 external modem	1 external modem	For remote technical support, use a 33.6 kbits/sec minimum modem, compatible with the US Robotics Sportster 33.6 modem. (For USB modems, use modems that are compatible with the US Robotics 56K Faxmodem USB).

Hardware item	Minimum	Recommended	Notes
Backup and restore	Backup system for database backup (can be either tape drive or remote directory)	Backup system for database backup: (can be either tape drive or remote directory)	For the tape drive option, the drive must be large enough to hold all the backup data for the complete database on a single backup tape (for more information on using tape drives to back up your database, refer to "Tape drive requirements" on page 51). **Note:** You can use hardware compression techniques if necessary.

N/A

Coresident server requirements

When performing a new installation or an upgrade to Release 5.0 of Symposium Call Center Server in a coresident server, the server must meet the following minimum requirements:

Note: Nortel recommends that you meet the recommended settings. The actual requirements for a call center vary depending on the number of agents, call rate, and other factors. To identify the platform that meets the capacity requirements of your call center, use the Capacity Assessment Tool, available from the Partner Information Center web site.

Item	Minimum	Recommended	Notes
Server software revision and SU level	Symposium Call Center Server Release 5.0 revision 4.0 or higher CD-ROM. Service Update (SU04) or higher		
CPU	Intel-based CPU, XEON 2 GHz	Intel-based CPU, XEON 2 GHz	▪ Supported processors include Pentium III Xeon, Pentium IV Xeon, Intel Xeon, Intel Xeon DP, and Intel Xeon MP. Dual CPU computers and Quad are supported. ▪ Nortel does not support Pentium II, Intel Celeron, Intel Itanium (IA 64). ▪ Use the Symposium Capacity Tool to ensure your server meets the requirements of your call center.

Item	Minimum	Recommended	Notes
RAM	1 Gbyte	1 Gbyte	Check the specific requirements for your call center using the *Planning and Engineering Guide*.
Hard drive	60 Gbytes logical disk space (120 bytes physical disk space if using RAID -1).	60 Gbytes logical disk space (120 Gbytes physical disk space if using RAID -1).	Nortel recommends RAID-1 for all disks on the shared SCSI bus to eliminate disk drives as a potential single source for hardware failures. Use the Symposium Capacity Tool to ensure your server meets the requirements of your call center.
Hard disk partitioning	1 hard drive for the operating system and Symposium Call Center Server software Another hard drive for the database partitions	1 hard drive for the operating system and Symposium Call Center Server software Another hard drive for the database partitions	Separate physical disks provide more reliability and ease of recovery in case of disk failure.
Hard disk type	SCSI bus for hard drives	SCSI bus for hard drives	IDE drives not supported (Recommended) Use RAID 1 hardware for all disks on the shared SCSI bus to eliminate disk drives as a potential single source for hardware failures.
Number of hard disks	1 physical drive	1 hard drive for the operating system and Symposium Call Center Server software Another hard drive for the database partitions	In case of disk failure, separate physical disks provide more reliability and ease of recovery.

Item	Minimum	Recommended	Notes
Hard disk speed	Hard drive speed of 7200 rpm (minimum) from manufacturer's specifications	Hard drive speed of 7200 rpm or higher, from manufacturer's specifications	Release 5.0 supports Windows basic disk partitioning and dynamic disk volumes; however, dynamic disk expansion is not supported.
Floppy drive	1 floppy drive	1 floppy drive	The drive letter must be A.
CD-ROM	1 CD-ROM drive	1 CD-ROM drive	The drive letter must be E. Minimum speed is 24X.
Serial ports	N/A	N/A	You cannot install a modem on a coresident server. See "Remote access support and coresidency" on page 37 for other support options.
Parallel port	Not required if connecting to M1 For DMS/SL-100, 1 parallel port must be physically configured on the server and enabled through the BIOS for the security dongle (you can also use the serial or USB port for the security dongle)	Not required if connecting to M1 For DMS/SL-100, 1 parallel port must be physically configured on the server and enabled through the BIOS for the security dongle (you can also use the serial or USB port for the security dongle)	
Network interface	2 network interface cards	2 network interface cards	ELAN must be 10/100 Mbps (Ethernet) CLAN should be 100 Mbps (Ethernet)

Item	Minimum	Recommended	Notes
Video card	1 video card and monitor	1 video card and monitor	800x600 minimum resolution
Mouse	1 mouse	1 mouse	
Modem	N/A	N/A	You cannot install a modem on a coresident server. See "Remote access support and coresidency" on page 37 for other support options.
Backup and restore	Backup system for database backup (can be either tape drive or remote directory)	Backup system for database backup (can be either tape drive or remote directory)	For the tape drive option, the drive must be large enough to hold all the backup data for the complete database on a single backup tape (for more information on using tape drives to back up your database, refer to "Tape drive requirements" on page 51). **Note:** You can use hardware compression techniques if necessary. To back up Symposium Web Client or TAPI, refer to their respective guides. To back up a coresident server, see Section C: "Using a third-party backup utility to create full backups," on page 1041.

Operating system and pcAnywhere

Introduction

Symposium Call Center Server Release 5.0 requires the Microsoft Windows Server 2003 (Enterprise or Standard) operating system.

ATTENTION

Other versions of the Windows Server 2003 operating system software, such as Windows Server 2003 Datacenter Server and Windows Server 2003 Web Edition, are not supported.

Operating system service pack

Install the latest Windows Server 2003 service pack that has been validated with Symposium Call Center Server. You can obtain this information from the *Symposium Service Packs and Security Hotfixes Compatibility List* (available on the Partner Information Center web site).

pcAnywhere

Nortel requires that pcAnywhere 11.0.1 be installed on the server to provide Symposium Call Center Server support through a dial-in modem.

Symposium Call Center Server port usage

The following table provides the listener ports that Symposium Call Center Server uses.

The table does not include the other base ports required for Windows Networking. For example, Windows Domain Naming Server (DNS) uses port 53.

Port number	Network interface	Functionality
135	CLAN	Microsoft Windows RPC Locator Service
137	CLAN	NetBIOS Name Service
138	CLAN	Microsoft NetBios Datagram Service
139	CLAN	NetBIOS Session Service
161	CLAN	SNMP (required if SNMP NMS is connected)
162	CLAN	SNMP traps (required if SNMP NMS is connected)
530	CLAN	Microsoft Windows RPC Courier Service
1024–65535	CLAN	The range of ports that can be used by the RPC dynamic ports **Note:** Symposium Call Center Server uses other hardcoded ports internally.
2500	ELAN	ICM

Port number	Network interface	Functionality
3000	CLAN	MLS (Enterprise Solution Link Services)
3150	ELAN	CallPilot Integration
3151	ELAN	CallPilot Integration
5000–5003	CLAN	Symposium Call Center Server Database
5004	CLAN	Sybase XP Server
5010	CLAN	Sybase Replication Server
5631	CLAN	pcAnywhere
5632	CLAN	pcAnywhere
8888	ELAN	AML
10008	ELAN	CallPilot Integration

Symposium Call Center Server also uses ports for communication between its own components. Most of these ports do not have implications for external network components like firewalls; however, some ports may be used externally and therefore can affect an external firewall. In particular, take note of port 10000, which is a hardcoded port used to enable interoperability between Symposium applications and external third-party applications (applications developed using the RTD API).

Any third-party application installed on the Symposium Call Center Server should not use any of the ports listed in the following table as it can cause the Symposium Call Center Server application to malfunction. Again, pay particular attention to port 10000 because it is a hardcoded port and cannot be re-configured.

The following table shows the ports that Symposium Call Center Server uses:

Port number	Functionality
3500	DMS
1550	HDX CAPI
4422	HDX NameService
12668–12670	TraceControl
10000–10082	Networking
10000–10082	Hardcoded Internal Listener Ports

Other hardware requirements

If you configure additional hardware on your server, such as COM ports 3 and 4, ensure that it is configured correctly (for instance, make sure that IRQs do not conflict with existing IRQs). Any further troubleshooting and hardware diagnostics are the responsibility of the hardware vendor.

Disk partitioning requirements

This section shows you how to partition your server for either a standalone or coresident Symposium Call Center Server.

The minimum partition sizes are based on the following:

2 Gbytes = 2048 Mbytes
4 Gbytes = 4096 Mbytes

The actual requirements for a call center will vary depending on the number of agents, call rate, and other factors. To identify the platform that meets the capacity requirements of your call center, use the Capacity Assessment Tool, which is available from the Partner Information Center web site.

Basic disk partitioning versus dynamic disk volumes

Symposium Call Center Server Release 5.0 supports Windows basic disk partitioning and dynamic disk volumes. When partitioning your drives, do not use the Windows option to upgrade to dynamic disks. Refer to the documentation provided with the operating system for details.

Primary and Extended partitions

The operating system resides on the C partition. This must be the only Primary partition. All other partitions (D, F, G, and so on) must be Logical drives within Extended partitions. Pay close attention to this when partitioning your drives. Refer to the documentation provided with the operating system for details.

Standalone server partitioning requirements

Drive letter	Minimum size	Maximum size	Notes
A	1.44 Mbytes	N/A	Floppy drive A
C	2 Gbytes (2048 Mbytes) + 1.5 x RAM *12GB	N/A	NTFS partition on disk 0. This must be partitioned as the Primary partition. The Windows Server 2003 operating system and pcAnywhere are installed here.
D	4 Gbytes (4096 Mbytes) *8GB	N/A	Additional NTFS partition on disk 0 or an NTFS partition on a different disk. This must be partitioned as a Logical drive within an Extended partition, since this partition is not used for booting. Symposium Call Center Server is installed here.
E	N/A	N/A	CD-ROM drive
F–U	4 Gbytes (4096 Mbytes)	16 Gbytes (16384 Mbytes) x4 **Note:** The maximum hard drive space for the database partitions is 64 Gbytes (65 536 Mbytes)	Drive F and any additional drives are used to store the database.

Notes:

- Additional database disk drive partitions can be on separate physical disks or on the same disk, depending on the customer's preference and hardware configuration. Nortel has tested database partitions on the same physical drive as C and D, and also on different physical drives from C and D.

* De acuerdo a boletin del 6/Jun/2005 titulado Symposium Portfolio Server and Operating System Requirements.

- Partitioned sizes on all database drives should be in increments of 1 Gbyte (equivalent to 1024 Mbytes).
- Drives F–U must be partitioned as Logical drives within Extended partitions, since these partitions are not used for booting.
- The maximum number of 16-Gbyte database partitions is 4.
- All database partitions must be of equal size (for example, all partitions must be *X* Gbytes in size, where *X* can be from 4 Gbytes to 16 Gbytes in 1-Gbyte increments).

Coresident server partition requirements

Drive letter	Minimum size	Maximum size	Notes
A	1.44 Mbytes	N/A	Floppy drive A
C	14 Gbytes [4096 Mbytes + (1.5 X RAM) + 8 Gbytes]	N/A	NTFS partition on disk 0. This must be partitioned as the Primary partition. The Windows Server 2003 operating system and pcAnywhere are installed here.
D	4 Gbytes (4096 Mbytes)	N/A	Additional NTFS partition on disk 0 or an NTFS partition on a different disk. This must be partitioned as a Logical drive within an Extended partition, since this partition is not used for booting. Symposium Call Center Server is installed here.
E	N/A	N/A	CD-ROM drive
F–U	4 Gbytes (4096 Mbytes)	16 Gbytes (16 384 Mbytes)	Drive F and any additional drives are used to store the database.

Notes:

- Additional database disk drive partitions can be on separate physical disks or on the same disk, depending on the customer's preference and hardware

configuration. Nortel has tested database partitions on the same physical drive as C and D, and also on different physical drives as C and D.

- Partitioned sizes on all database drives should be in increments of 1 Gbyte (equivalent to 1024 Mbytes).
- Drives F–U must be partitioned as Logical drives within Extended partitions, since these partitions are not used for booting.

Domains and Windows Server 2003 security policies

Introduction

Before you add Symposium Call Center Server to a domain, make sure that you read the *Symposium Call Center Server Security Guide*, available from the Partner Information Center web site.

Note: You must install the Symposium Call Center Server software before you add the server to a domain.

Minimum Service Update for domains

You must use at least Service Update SU04 when adding Symposium Call Center Server to a domain.

Windows Time Service

If you are using an M1/Succession switch, make sure to stop and disable the Windows Time Service. See "Stop and disable the Win 32 Time Service (M1 switch)" on page 190 for more information.

Note: If you are using a DMS switch or installing an NCC, you do not need to stop the Windows Time Service.

Domain group policy

When you install Release 5.0 of Symposium Call Center Server, the installation also creates local accounts that contain default non-complex passwords of six characters. As a result, the security policy of the Windows Server 2003 Domain controller may conflict with these default settings and can cause your installation, upgrade, or migration to fail.

The following three accounts may be affected:

- NGenSys

- NGenDist
- NGenDesign

In order to prevent the installation from failing because of such a conflict, the installation steps in this guide instruct users to add their server to their domain *after* installing the server software of Symposium Call Center Server. When installing a coresident server, this guide instructs users to add their server computer to a domain *after* installing Symposium Web Client.

Once you have installed the server software, you can change the passwords for the affected accounts. For detailed instructions for changing the default Symposium Call Center Server passwords, see "To change the NGenDist, NGenDesign, or NGenSys passwords" on page 974.

Other solutions

If you want to add your server to a domain before installing the server software of Symposium Call Center Server, you can adjust your group policies for Release 5.0 of Symposium Call Center Server, or, exclude the Symposium Call Center Server computer from a specific group policy.

Redundant Array of Independent Disks

The following components are essential to perform diagnostics, installation, and maintenance procedures:

- Windows Server 2003 (Enterprise or Standard) CD-ROM
- manufacturer's RAID controller driver disk, if a RAID controller is used
- manufacturer's diagnostics software
- (optional) blank backup tape for execution of tape diagnostics
- manufacturer's documentation for installing, maintaining, and troubleshooting the platform and peripherals

For maximum security and mission-critical systems, Nortel recommends that the server contain a RAID 1 (type 1) controller. The Redundant Array of Independent Disks (RAID) technology provides disk data redundancy as well as error detection and correction. With the RAID controller, you can configure your linked drives into a RAID subsystem.

Microsoft Software-RAID is not supported. However, Nortel supports RAID in the manner that Stratus implements RAID. RAID 1, also known as disk mirroring, involves at least two drives duplicating the storage of data. There is no striping. Read performance is improved since either disk can be read at the same time. Write performance is the same as for single-disk storage. RAID 1 provides the best performance and the best fault-tolerance in a multi-user system, but at a higher cost.

Note: RAID 5, on the other hand, involves a rotating parity array, addressing the write limitation in RAID 4. All read and write operations can be overlapped. RAID 5 stores parity information but not redundant data. However, parity information can be used to reconstruct data. RAID 5 requires a minimum of three and usually five disks for the array. It is best for multi-user systems in which performance is not critical or which involve few write operations.

RAID implementation issues must be addressed by the RAID vendor.

Third-party software on the server

Introduction

Due to the mission-critical, real-time processing performed by Symposium Call Center Server, you must not install any other application class software on the server. You can install certain utility class software on the server, providing it conforms to the guidelines listed in the following section.

- Application class software generally requires a certain amount of system resources and, therefore, must not be installed on any server running Symposium Call Center Server. The installation of application class third-party applications may cause a real-time system, such as Symposium Call Center Server, to operate outside of the known engineering limits and, therefore, create potential unknown system problems (for example, CPU contentions, increased network traffic loading, disk access degradations, and so on).
- Certain third-party utility class software applications, such as hardware diagnostics, generally require less system resources during the normal operation of Symposium Call Center Server and, therefore, are permitted. Exceptions are utilities such as screen savers, which may cause system problems and degrade performance. Antivirus software is classified as a utility and is subject to the following generic guidelines, as well as a specific series of recommendations detailed in "Additional guidelines for use of antivirus software" on page 75.

Note: Nortel does not support connection to Symposium Call Center Server through a Citrix environment. However, you can now access Symposium Web Client and Agent Desktop Displays through Citrix MetaFrame XPb environment.

Guidelines for utility class software applications

- The utility must not reduce the hard disk space available to Symposium Call Center Server and the Windows Server 2003 operating system below the minimum required.
- The installation or uninstallation of the third-party software should not impact or conflict with the Symposium Call Center Server software (for example, it must not cause .DLL conflicts). If such conflicts occur, you may need to rebuild the server.
- If the utility has its own database, it must not impact the Symposium Call Center Server Sybase database.
- The utility must not interfere with Symposium Call Center Server services in any way. (For example, do not use third-party server management and monitoring utilities to shut down or restart Symposium Call Center Server services).
- The utility must not administer the Symposium Call Center Server software.
- The utility must not use ports that are reserved for Symposium Call Center Server. See "Symposium Call Center Server port usage" on page 63 for more information.
- During run time, the utility must not degrade the Symposium Call Center Server system beyond an average 50 percent CPU utilization.
- Do not use disk compression utilities.
- Do not use memory tweaking utilities (for example, WinRAM Turbo, Memory Zipper, and so on) to reclaim memory that is unused by Microsoft.

Before putting the server into production, implementation personnel must test to ensure these conditions and recommendations are met. Nortel support personnel may ask for the results of the testing during fault diagnosis.

Note: If performance or functionality issues are raised to Nortel support personnel, as part of the fault diagnosis process, the customer/distributor may be asked to remove third-party software.

Additional guidelines for use of third-party backup software

Symposium Call Center Server does not provide a full backup facility. You can use third-party backup software to create a full backup of your server. If you do, additional guidelines apply. For more information, see "Guidelines for third-party backup software" on page 1043.

Note: Even if you create a full backup, you must continue to perform regular Symposium Call Center Server database backups. Due to the proprietary functions called during backup of the database, you must use the backup utility provided with Symposium Call Center Server to perform database backups. For more information, see Chapter 19, "Backing up data."

Additional guidelines for use of antivirus software

The risk of virus infection on the server in Symposium Call Center Server is minimal due to the limited access required for support of the server. Typically, only maintenance personnel have local access to the servers or remote access through pcAnywhere connections. However, Nortel acknowledges that some customers' security policies may require the installation of antivirus software on the server in Symposium Call Center Server.

Nortel has tested a representative sample of antivirus software packages (Norton Antivirus, McAfee NetShield, and Computer Associate's eTrust) to determine the following generic guidelines for the use of antivirus software:

- Install the antivirus software after installing Symposium Call Center Server. When the antivirus software is installed, it is the implementation personnel's responsibility to perform testing with the antivirus software, in accordance with the guidelines for utility-class implementations outlined above. If, however, the antivirus software is already installed on the server computer as part of the customer's corporate policy, make sure to disable the antivirus software when installing Symposium Call Center Server.
- During PEP installations on both the client and server, all antivirus functionality should be disabled (for example, firewalls, [passive] scanning, auto updates, and so on), and should not start up automatically until the entire Symposium Call Center Server installation procedure is complete. Reenable antivirus functionality afterwards, as required.
- If personal firewalls are enabled on the Symposium Call Center Server client PC, then the Report Listener may be flagged as trying to access the Internet. The properties must be configured to allow the Report Listener to have access to Symposium Call Center Server through the firewall.
- Virus scans must be set to run on the server during off-peak hours, and not to start on the hour.

Note: Several maintenance tasks are automatically activated on Symposium Call Center Server at midnight, so an off-midnight time must be ensured. Similarly, active virus scans must be disabled when running diagnostic traces or logs on the server.

- The antivirus software must not be configured to deal automatically with suspected infected files. In the event of infected files being located, do not attempt to replace or remove them. Contact your local Nortel support representative for assistance in determining if the files are part of the Symposium Call Center Server application or critical system files.
- Nortel recommends that you exclude from scanning the files located in the following folders:
  - F:\Nortel\Database\
  - *<additional database drive>*:\Nortel\Database\

  In addition, the following file must be excluded:
  - D:\Nortel\ICCM\BIN\Tools2.exe

  Note: You will encounter file access errors in the Scan Activity log if you do not exclude this latter file from scanning.
- You must not connect Symposium Call Center Server directly to the Internet to download virus definitions or updated files. Furthermore, Nortel recommends that you do not use the Symposium Call Center Server client to connect to the Internet. Instead, you must download virus definitions and updated files to another location on the customer network, and manually load them on the server in Symposium Call Center Server. This is the same recommended procedure for downloading Symposium PEPs. This method limits access to the Internet, and thus reduces the risk of downloading infected files.
- Nortel recommends that you scan all PEP files, CD-ROMs, and floppy disks prior to installation or uploading to the server. This practice minimizes any exposure to infected files from outside sources.
- Nortel has not tested SNMP alerting on virus confirmation, and is unable to ascertain any potential impact on Symposium Call Center Server. Nortel does not recommend, therefore, that you activate this feature.
- Virus scan software can place an additional load on Symposium Call Center Server. It is the implementation personnel's responsibility to run the performance monitor tool on the server to gauge CPU utilization. If the antivirus software scan causes Symposium Call Center Server average CPU

utilization to exceed 50 percent for longer than 20 minutes, then the antivirus software must not be loaded onto the server in Symposium Call Center Server.

Notes:

- Nortel does not provide support on the configuration of antivirus software, but it tries to offer guidance where possible. Questions or problems on antivirus software should be directed to the appropriate vendor.
- The above recommendations are intended as guidelines only, and do not constitute a guarantee of compatibility. Nortel does not plan to perform ongoing compatibility testing, or testing on other antivirus packages.

Section B: Installing the hardware

In this section

Overview

This section describes how to connect external and peripheral hardware components to the server. Before you can connect these components, you must install the server hardware according to the manufacturer's instructions and recommendations.

The following external connections are required for Symposium Call Center Server:

- a network connection to the Meridian 1/Succession 1000 or DMS/SL-100 switch
- a network connection to the Symposium Call Center Server Release 4.0 client
- a feature key adapter (dongle) installed on the parallel port. The feature key adapter is supplied by Nortel for servers connected to a DMS/SL-100 switch. You can also use a USB dongle (not supplied by Nortel)
- a serial connection with Meridian Mail (if you are using Symposium Voice Services on Meridian Mail, or if you are using Meridian Mail as your IVR system)
- a serial connection to a modem for remote support. (You can also use a USB modem connected to a USB port)

This section provides information about

- connecting the ELAN
- connecting the CLAN
- installing the software feature key adapter
- connecting Meridian Mail with a serial port (if you are using Meridian Mail)
- connecting the modem

Step 1. Connect the ELAN

Introduction

A network card for the Embedded Local Area Network (ELAN) is a system requirement. The ELAN is the private LAN used to connect Nortel equipment at the customer site. The Ethernet hub or switch is supplied by the customer.

Note: The ELAN card is not required for an NCC.

To connect the ELAN

1. Locate the slot assigned to the ELAN card for the server. Make a note of the slot.
2. Write the MAC address of the card on a small label. Attach the label to the back of the card or the chassis slot position.
3. Connect the ELAN network cables from the Nortel equipment to the Ethernet hub or switch.
4. Connect the LAN cable from the ELAN card in the server to the hub or Ethernet switch.
5. Plug in the power cord for the hub or Ethernet switch.

Step 2. Connect the CLAN

Introduction

A network card for the Customer Local Area Network (CLAN) connects Nortel systems to the customer's internal Ethernet LAN.

To connect the CLAN

1. Locate the slot assigned to the CLAN card for the server. Make a note of the slot.
2. Write the MAC address of the card on a small label. Attach the label to the back of the card or the chassis slot position.
3. Connect the cable from the CLAN to the CLAN card in the server in accordance with customer site networking guidelines.
4. Plug in the power cord for the hub or Ethernet switch.

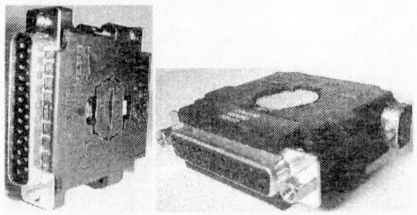
Step 3. Connect the software feature key adapter

Introduction

Note: The feature key adapter is used only for Symposium Call Center Server applications when the server is connected to a DMS/SL-100 switch.

The Symposium Call Center Server installation package includes a software feature key adapter containing a feature key or dongle. This device verifies that you have the software package that was purchased for this system. You can set up and test Symposium Call Center Server without the adapter. However, before you connect to the switch to go live, you must ensure that the adapter and dongle are attached to the parallel port. Without the dongle, the switch and the server cannot communicate.

The software feature key is a security device that stores the server's unique serial number. The serial number is embedded in the dongle, which is fitted into the feature key adapter, and plugs into the parallel port.



Note: To obtain and install a USB iButton dongle instead of the supplied serial port dongle, please see Appendix E, "Using a USB iButton dongle," on page 1300.

Tools required

- Phillips No. 1 screwdriver

To connect the software feature key adapter

1. Ensure that there is no cable connected to the parallel port.

   Note: The parallel port is also known as the printer port or LPT1.

2. Plug the male end of the adapter into the parallel port.

Step 4. Connect Meridian Mail with a serial port

Introduction

If you are using Meridian Mail to provide voice processing or IVR services, you must connect the server to Meridian Mail.

To connect Meridian Mail with a serial port

1. Plug the null modem adapter and RS-232 serial cable from the Meridian Mail COM port into the COM2 port on the server.
2. When the operating system is installed, ensure that COM2 is set to 9600 bps.

   Result: The connection to Meridian Mail is complete.

   Note: For COM1, set the base I/O Port Address to 3F8 and the IRQ to 4.

Step 5. Connect the modem

Introduction

An external modem connected to a serial port on the server provides connectivity for technical support personnel. Use this procedure to connect the modem. The modem must have a minimum capability of 33.6 kbits/sec and be compatible with the US Robotics Sportster 33.6 modem. You can also connect a USB modem to the USB port on the server. See Appendix E, "Using a USB iButton dongle," on page 1300.

To connect the modem

1. Ensure that the AC cord of the modem is not plugged in.
2. Connect the large 25-pin male connector to the back of the modem. Tighten the connector screws.
3. Connect the 9-pin female connector to COM1 at the rear of the server. Tighten the connector screws.
4. Check that the modem switches are set as follows:

   Note: The following table shows switch settings for the US Robotics Sportster 33.6 modem. Use these settings as a guide to the features required if you are installing a different type of modem.

Switch position	Up (OFF)	Down (ON)	Function
1	✓		Normal DTR operation (The computer must provide a DTR signal for the modem to accept commands. Dropping DTR terminates a call.)
			Modem ignores DTR (override)
2	✓		Verbal (word) results
			Numeric results
3			Suppresses results codes
		✓	Enables results codes
4			Echoes keyboard commands
		✓	Suppresses echo of keyboard commands
5			Modem answers on first ring, or higher if specified in NVRAM
		✓	Disables auto answer
6	✓		Modem sends Carrier Detect when it connects with another modem; drops Carrier Detect on disconnect
			Carrier Detect is always on (override)
7	✓		Loads Y or Y1 configuration from user-defined nonvolatile memory (NVRAM)
			Loads and F0-Generic template from read-only memory (ROM)
8			Disables command recognition (dumb mode)
		✓	Enables command recognition (smart mode)

5 Connect one end of the telephone cable to the modem RJ-11 jack labeled LINE.

6 Connect the other end of the telephone cable to the RJ-11 jack in the wall.

7 Connect the power cord to the modem, and plug the other end into a wall receptacle or power bar. Turn on the modem.

What's next?

Proceed to Chapter 4, "Installing the server software," to install one of the following:

- a standalone Symposium Call Center Server
- a coresident Symposium Call Center Server
- a Network Control Center server
- a Meridian Link standalone server

Chapter 4

Installing the server software

In this chapter

Overview

Introduction

This chapter describes how to install Release 5.0 of Symposium Call Center Server on your server. This chapter is divided into the following three sections:

Preinstallation	Steps to perform before installing the Release 5.0 software.
Installation	Steps to perform to install and configure the Release 5.0 software.
Post-installation	Steps to perform after completing the installation of the Release 5.0 software.

Use the Symposium Call Center Server Release 5.0 Server Application CD to install the following:

- a standalone Symposium Call Center Server
- a coresident Symposium Call Center Server
- a Network Control Center server
- a Meridian Link standalone server

Assumptions

This chapter assumes the following:

- Your hardware platform is a Windows Server 2003 configured for use with Symposium Call Center Server.
- The switch is correctly installed, operational, and configured for use with Symposium Call Center Server.
- All client PCs are operational and running one of the following versions of Windows:
  - Windows 2000 Professional

- Windows XP Professional (only supported on Rev. 5 or later of the Client Application CD).
- All client PCs use Microsoft TCP/IP.
- The Customer Local Area Network (CLAN) and the Embedded Local Area Network (ELAN) are installed and operational.

Installing Symposium Call Center Server networking (for Meridian 1/Succession 1000 only)

If you are installing networking, plan the server installation information for all servers. Refer to the *Network Control Center Administrator's Guide* for networking requirements and planning information.

Methods of server installation

How you install the server software depends upon the environment in which you are working.

Method	Requirements
Run the installation program from the Symposium Call Center Server Application CD-ROM. Use the CD-ROM drive that is part of the hardware platform.	keyboard, mouse, and monitor attached to the server
Run the installation program from a remote CD-ROM drive that is accessible over the LAN. **Note:** This method is not recommended, as network traffic can interfere with proper installation.	keyboard, mouse, and monitor attached to the server

Method	Requirements
Run the installation program from a remote hard disk copy of the installation CDs. **Note:** This method is not recommended, as network traffic can interfere with proper installation.	a copy of the CDs on a remote hard disk (accessible over the LAN from the server in Symposium Call Center Server) The path name of the directory that contains the copy of the CDs cannot contain spaces and must be a mapped drive using a drive letter, for example, Z:\SCCS\5.0\Rev3.

ATTENTION Installation from a remote CD-ROM drive is supported only if the remote PC is running Windows 2000 Server or Professional, Windows Server 2003 Enterprise or Standard, or Windows XP Professional.

Event logging

The SysOps Event log (D:\sysops.log) tracks events associated with any installation, reinstallation, upgrade, or uninstallation operation. It also tracks any fatal errors that interrupt these operations.

Use any text editor (for example, Notepad) to view the SysOps Event log.

What you need

The following checklist contains the software and equipment you need to install Symposium Call Center Server Release 5.0.

Qty	Description	✔
1	Nortel Networks Symposium Call Center Server Release 5.0 Server Application CD-ROM	
1	(If supplied with this installation) Nortel Networks Symposium Call Center Server Supplementary CD-ROM. This CD contains product enhancement packages (PEPs) and Service Update packs. **Note:** The Meridian PEP Library web site contains the latest versions of all PEPs and Service Update packs.	
1	pcAnywhere 11.0.1 Host-Only CD-ROM	
1	Documentation CD-ROM. This CD contains all Symposium Call Center Server documents in PDF format.	
1	Keycode data. This data governs the software features you install. This data is usually contained on a disk. However, if you do not have the disk but you know your keycode data, you can enter the information manually during the installation.	
1	(For DMS/SL-100 systems only) dongle	

Section A: Preinstallation

In this section

Step 1. Read the relevant documentation for performing a new installation

Before performing an installation, check for any Installation Addenda or updated customer documentation on the Nortel web site (www.nortelnetworks.com), or the Partner Information Center web site.

Step 2. Record and check for required installation information

Use the following checklist to record information required for your Windows Server 2003 and Symposium Call Center Server installation (standalone or coresident). You will need to refer to this checklist for specific information during the installation.

Step	Details	✔
1 Record the server computer and operating system.	You will need to reference the following information when installing Windows Server 2003: ■ Windows Server 2003 licence key_____ _____ ■ computer name _____ (6–15 characters in length. First character must be alphabetical. Letters, numbers, and underscores are allowed. No spaces or dashes are allowed. Name must be unique on the network) ■ administrator password _____ ■ workgroup or domain name_____ ■ type of modem for the server _____ ■ CLAN user name _____ ■ CLAN password _____ ■ CLAN domain name _____	

Step	Details	✔
2 Record switch information.	The following restrictions apply to switch names: ■ Valid characters for switch names are A–Z, a–z, 0–9, _ (underscore), and . (period). ■ Switch names must begin with an alphabetical character and cannot contain spaces. ■ The last character must not be an underscore or a period. ■ Switch names must not exceed 80 characters in length. **Meridian 1/Succession 1000** ■ Switch name _____ **Note:** The switch name does not need to match the M1 Host Name. It is recorded here for reference only. ■ Switch customer number _____ ■ Switch ELAN primary IP address (for example, 255.255.255.255) _____ ■ Switch ELAN secondary IP address (for example, 255.155.155.237) _____ **Notes:** ■ If you enter an incorrect value during installation, you can use the Feature Report utility (see "Feature Report" on page 1109) to correct the value after installation. ■ Switches with two processors require two IP addresses. Use the switch primary address for the primary CPU (core 0), and use the secondary address for the redundant CPU (core 1). For smaller switches, such as an Nortel Meridian 1 PBX 11C - Cabinet, you need only the primary address.	

Step	Details	✔
Record switch information (continued).	▪ Ensure that the switch host name, IP name, and net mask are the same as those displayed by the STAT ELNK command in LD 137. Ensure that the switch serial number matches the one delivered with the Symposium Call Center Server keycode. **DMS/SL-100 switch information** Switch name _____ Switch customer number _____ Switch IP address (for example, 255.255.255.255) _____ IP addresses for routers on the ICM connection between the switch and ELAN _____ _____ Network node ID _____ Service ID _____ Application ID _____ Service version _____ Business group _____ Link set name _____ Password _____ Remote host IP address (optional) _____ **Notes:** ▪ If you enter an incorrect value during installation, you can use the Feature Report utility (see "Feature Report" on page 1109) to correct the value after installation. ▪ If an IP addressing scheme has not yet been established for the ICM connection, see your network administrator.	

Step	Details	✔
3 Record the ELAN and CLAN IP information.	Record the server's IP addresses for both ELAN and CLAN connections. The customer's LAN administrator is the source for IP addresses, subnet masks, and gateways. **Note**: ELAN and CLAN addresses must be unique. Nortel-supplied PCs are equipped with an ELAN network interface card. If you are configuring a Network Control Center server, you do not need to connect the ELAN network interface card to the ELAN cable. However, to ensure proper functionality, enter an IP address for the ELAN network interface card that is not used elsewhere in the network. **ELAN M1 Primary** ▪ IP Address _____ ▪ Subnet mask _____ ▪ Gateway, description, or name _____ _____ **ELAN M1 Secondary** ▪ IP Address _____ ▪ Subnet mask _____ ▪ Gateway, description, or name _____ _____ **ELAN server** ▪ IP Address _____ ▪ Subnet mask _____ ▪ Gateway, description, or name _____ _____	

Step	Details	✔
Record the ELAN and CLAN IP information (continued).	**ELAN router/gateway IP address** ■ IP Address _____ ■ Subnet mask _____ ■ Gateway, description, or name _____ _____ **CLAN server** ■ IP Address _____ ■ Subnet mask _____ ■ Gateway, description, or name _____ _____ **CLAN router/gateway IP address** ■ IP Address _____ ■ Subnet mask _____ ■ Gateway, description, or name _____ _____ **RAS** ■ IP Address _____ ■ Subnet mask _____ ■ Gateway, description, or name _____ _____	

Step	Details	✔
4 Record the MAC address for the ELAN and CLAN cards.	If the ELAN and CLAN card types are identical, the MAC address can help you to identify each card for testing and configuration purposes: **ELAN** ■ Slot number_____ ■ MAC address_____ **CLAN** ■ Slot number_____ ■ MAC address_____	
5 Record server and client software installation information.	Customer name _____ Company name _____ Keycode and serial number. This can be on a disk; if so, indicate "on disk." For DMS/SL-100, use the dongle number as the serial number._____ _____ Switch information _____ _____ ELAN and CLAN IP addresses _____ _____ **Note:** ELAN and CLAN addresses must be unique. Nortel-supplied PCs are equipped with an ELAN network interface card. If you are configuring a Network Control Center server, you do not need to connect the ELAN network interface card to the ELAN cable. However, to ensure proper functionality, enter an IP address for the ELAN network interface card that is not used elsewhere in the network.	

Step	Details	✔
Record server and client software installation information (continued).	Site name _____ This name can consist of up to 15 characters, except the \ (backslash) character. In a multi-site network, the site name for each server must be unique. The application uses this name to identify the server in reports. **Note**: For Meridian 1/Succession 1000 switches with the Network Skill-based Routing feature, the NCC site name is automatically propagated to servers. (Networking option only) IP address of RSM server _____ ▪ New password for NGenDesign account (This is a user account for Nortel support.) *For security reasons, do not record the password here.* ▪ New password for NGenDist account (This is a user account for distributors to provide support.) *For security reasons, do not record the password here.* Modem phone number for the server (for dial-up connections from the client PC) _____	

Step	Details	✔
6 Check for equipment and data required for the server installation.	Ethernet connections ready at the switch (cable and transceiver/Multistation Access Unit)	
	Hub or Ethernet switch for the ELAN	
	Jacks and cable ready to connect the server to the CLAN	
	(Optional) Cable ready to connect the ELAN to the customer WAN	
	List of unique names and IP addresses for all equipment on both the CLAN and ELAN	
	Use the Capacity Assessment Tool to analyze customer LAN bandwidth. Existing average bandwidth utilization = _____%	
	(Recommended) Uninterrupted Power Supply (UPS). (See the *Planning and Engineering Guide*.)	

Step 3. Install and configure Windows Server 2003

Introduction

This section shows you how to install or configure Windows Server 2003 correctly for installing Symposium Call Center Server.

CAUTION

Risk of installation failure

If your server has Windows NT or Windows 2000 installed, do not upgrade from Windows NT or Windows 2000 to Windows Server 2003. Instead, remove the drive partitions and reformat the hard drives on the server. Then perform a new installation of Windows Server 2003 Enterprise or Standard Edition on the server. This eliminates the possibility of carrying over incorrect settings from the previous installation.

Performing a new installation of Windows Server 2003 (standalone or coresident)

Use the following checklist to perform a new installation of Windows Server 2003:

Install Windows Server 2003		
Step	**Details**	✔
1 Set up your RAID configuration.	If your server uses RAID, make sure that the RAID configuration is set up according to the manufacturer's instructions.	

Install Windows Server 2003		
Step	**Details**	✔
2 Obtain the Windows Server 2003 CD-ROM.	Use either Windows Server 2003 (Standard Edition) or (Enterprise Edition). **Note:** Do not use Windows Server 2003 Datacenter or Web editions.	
3 Start the Windows Server 2003 installation.	Start the installation of Windows Server 2003 according to the instructions supplied with the operating system. Follow the on-screen instructions to create a partition for the operating system. This partition must reside on drive C of your server on an NTFS partition. See "Coresident server partition requirements" on page 68 for more information. Setup copies the operating system files to the installation folders on the new partition. When the copy process is complete, the system restarts. The Windows Server 2003 Setup wizard appears.	
4 Complete the Windows Server 2003 Setup wizard.	Use the following guidelines in this table to complete the Windows Server 2003 Setup wizard.	
Regional Settings window	Complete this window as required for your site.	
Personalize Your Software window	Complete this window as required for your site.	
Your Product Key window	Enter the License product key.	
Licensing Modes window	Nortel recommends that you use the "Per server" licensing mode and that you have a minimum of five concurrent connections. This is the default.	

Install Windows Server 2003		
Step	**Details**	✔
Computer Name and Administrator Password window	Enter the computer name and administrator password, as recorded in "Step 2. Record and check for required installation information" on page 97. **Note:** Pay close attention to the naming rules for the computer name as described in the worksheet (no spaces, hyphens, or dashes are allowed).	
Date and Time Settings window	Complete this window as required for your site. Make sure the correct time zone is set for the server. For the check box Automatically adjust clock for daylight saving changes, do one of the following: ▪ If you are using a Meridian 1/Succession 1000 switch, ensure that Automatically adjust clock for daylight saving changes is unchecked. ▪ If you are using a DMS/SL-100 switch, ensure that Automatically adjust clock for daylight saving changes is checked for regions using daylight saving time. ▪ If you have purchased the Network Skill-Based Routing feature and are setting the time zone for the Network Control Center server, ensure that Automatically adjust clock for daylight saving changes is checked.	
Modem Dialing Information window	Complete this window as required for your site. **Note:** This window appears if you have a modem attached to the server. If this window does not appear, proceed to the next window.	
Networking Settings window	After the system has installed the networking components and the status bar has finished scrolling, select Custom settings.	

Install Windows Server 2003		
Step	**Details**	✔
Networking Components window	Use this window to select networking components and set up the TCP/IP parameters for the CLAN and ELAN network interface cards. Refer to your entries in the IP address table in "Step 2. Record and check for required installation information" on page 97. **Networking components selection** After detecting the first network card, the Windows Server 2003 Setup wizard displays a list of networking components for that card. For each network card, the following three components are selected by default. Do not deselect any of these default networking components: ▪ Client for Microsoft Networks ▪ File and Printer Sharing for Microsoft Networks ▪ Internet Protocol (TCP/IP) **TCP/IP parameters for CLAN and ELAN cards** Complete the following steps for each card that the Setup wizard detects on your server: 1 Click Internet Protocol (TCP/IP), and then click Properties. 2 In the General tab, enter the IP information required for the card (for example, IP address, subnet mask, and default gateway). Consult with the network administrator for the site. **Note:** To complete the installation successfully, you must enter an IP address for each network interface card. If you do not yet have the correct IP addresses for the cards, then type "dummy" IP addresses now. Remember to reconfigure the cards with the correct addresses later. 3 From the General tab, click Advanced. Use the DNS and WINS tabs to type information about DNS and WINS servers. Consult with the network administrator for the site.	

Install Windows Server 2003		
Step	**Details**	✔
Workgroup or Computer Domain window	**Note:** If you are installing a coresident server that includes a TAPI server, you must add the server to a domain after installing TAPI. **To add computer to a workgroup** 1 Select "No, this computer is not on a network, or is on a network without a domain." 2 In the "Workgroup or computer domain" box, type the workgroup name that you entered in the checklist titled "Step 2. Record and check for required installation information" on page 97. To add a standalone server to a domain, do so only *after* you have installed Symposium Call Center Server. To add a coresident server to a domain, do so only after you have installed Symposium Web Client, or after TAPI (if installing TAPI). For details, see "Step 14. Add server to domain (optional)" on page 181.	
5 Log on to Windows Server 2003.	Once the Windows Server 2003 Setup wizard completes the installation of the operating system, you must configure the operating system before installing Symposium Call Center Server. Remove the CD-ROM. When logging on to Windows Server 2003 for the first time, the Windows 2003 Manage Your Server wizard appears. This wizard is not necessary for Symposium Call Center Server functionality. However, proceed to the next step (Step 6) to configure additional server software. **TIP:** Check the "Don't display this page at logon" checkbox.	

Install Windows Server 2003		
Step	**Details**	✔
6 Add/Remove Programs.	Use Add/Remove Programs to configure your Windows Server 2003 operating system for either a standalone or coresident installation. **Standalone** **TIP:** 1 From the Start menu, choose Settings → Control Panel. 2 Double-click Add/Remove Programs. 3 Click Add/Remove Windows Components to view a list of the installed components. 4 IIS is a subcomponent of Application Server and is checked by default. Click **Application Server**, and then click **Details** to uncheck IIS on the components list. 5 Select Management and Monitoring Tools, and then click Details. 6 Make sure the check box beside SNMP is checked. If it is checked, then SNMP is installed. 7 Click OK to return to the Add/Remove Windows Components property page.	

Install Windows Server 2003		
Step	**Details**	✔
Add/Remove Programs (continued).	**Coresident** **TIP:** 1 From the Start menu, choose Settings → Control Panel → Add/Remove Programs. 2 Click Add/Remove Windows Components to view a list of the installed components. 3 Click Terminal Server, Terminal Server Licensing, and Application Server. Terminal Services is required for Symposium Call Center Server's Scripting component. 4 IIS is a subcomponent of Application Server and is checked by default. Click **Application Server**, and then click **Details** to check IIS on the components list. 5 SMTP is a subcomponent of IIS and is unchecked by default. Click **Internet Information Services**, and then click **Details** to check SMTP on the components list. 6 Select Management and Monitoring Tools, and then click Details. 7 Make sure the check box beside SNMP is checked. If it is checked, then SNMP is installed. 8 Click Next. 9 Make sure Full Security is selected, and then click Next. 10 Click Next. 11 Click Finish. 12 Restart your computer. **Note:** Although you must install SNMP, you *do not* need to configure SNMP. However, if desired, you can choose to configure the SNMP service to forward traps to your Network Management System. For details, see "Configuring SNMP on the server" on page 985.	

Install Windows Server 2003		
Step	**Details**	✔
7 Check the virtual memory settings.	Verify that the virtual memory on the server is RAM size times 1.5. Set both the initial and maximum size to this value. If the virtual memory is smaller, increase it to RAM size times 1.5. Nortel recommends that the paging file be located on drive C. **TIP:** 1 From the Start menu, choose All Programs → Control Panel. 2 Click System. 3 On the General tab, take note of the server's RAM size. 4 Click the Advanced tab, and then click Performance Settings. 5 Click the Advanced tab again. 6 Click Change to view and make changes to the virtual memory settings. 7 Restart the server if prompted. **Note:** For a system with 512 Mbytes of RAM, the default minimum paging file size is 768 Mbytes and the default maximum paging file size is 1 Gbyte. To optimize performance, Microsoft recommends that the minimum paging file size equal the maximum paging file size. Nortel recommends that both the minimum and maximum paging file sizes be set to 1.5 * RAM. If any of the following conditions apply, the system's complete memory dump is not generated when the system stops unexpectedly: ▪ Multiple paging files are distributed over separate disks ▪ The paging file is not located on drive C ▪ Physical RAM size is larger than 2 Gbytes Due to the limitations presented by large paging files, Nortel recommends the following: ▪ Set the minimum and maximum paging file sizes to 1.5 x RAM, up to a maximum paging file size of 2 Gbytes ▪ Add the paging file to the drive C partition only. Do not create paging files on database partitions or other partitions	

Install Windows Server 2003		
Step	**Details**	✔
8 Configure the modem connection for remote access.	**Note:** Skip this step if you are installing a coresident server. For remote support options for a coresident server, see "Remote access support and coresidency" on page 37. Configure a direct serial connection for the modem hardware connected to your server. The modem uses COM 1. **TIP:** **1** From the Start menu, choose Settings → Control Panel. **2** Double-click Phone and Modem Options. **3** Click the Modems tab, and then click Add. **4** Follow the instructions in the Add/Remove Hardware Wizard to detect the modem and install the driver.	
9 Check the bindings order for the CLAN and ELAN cards.	You must configure the bindings order of the network interface cards so that the CLAN card comes first, then the ELAN card, then the virtual adapters for remote access. **TIP:** **1** From the Start menu, choose Settings → Control Panel. **2** Double-click Network and Dial-up Connections. **3** Click either the CLAN or ELAN connection, and then from the Advanced menu, click Advanced Settings. **4** In the Connections box, make sure that the CLAN connection is listed first. If it is not first, adjust the order.	

Install Windows Server 2003		
Step	**Details**	✔
10 Check the serial port configuration.	Use the Windows Device Manager to check that the required serial ports exist. You require COM1 to provide remote support, unless you are using the USB port or VPN for remote access. Also, you require COM2 for Symposium Voice Services on Meridian Mail. **TIP:** **1** From the Start menu, choose Settings → Control Panel. **2** Click System, and then click the Hardware tab. **3** Click Device Manager, and then double-click Ports (COM and LPT) to view the communications ports. **4** For COM1, set the base I/O Port Address to 3F8 and the IRQ to 4. If a required port does not exist: **1** Ensure that the port is installed. **2** Go to the BIOS and correct the address of the missing port.	

Install Windows Server 2003		
Step	**Details**	✔
11 Format all disk drives.	Ensure that the disk drives on the server are formatted as per the requirements for Symposium Call Center Server Release 5.0. For details, see "Disk partitioning requirements" on page 66. **Notes:** ▪ If the Welcome to the Write Signature and Upgrade Disk wizard appears, click Cancel. This wizard is only for configuring dynamic disk partitioning. Release 5.0 supports Windows basic disk partitioning and dynamic disk volumes. When partitioning your drives, do not use the Windows option to upgrade to dynamic disks. ▪ If you are performing an upgrade, make sure you fully understand the partition requirements on your new server. Refer to the section on disk partitioning requirements in your upgrade procedure. Note that file and folder compression are also not supported. **TIP:** 1 From the Start menu, choose Programs → Administrative Tools → Computer Management. 2 Under Storage, click Disk Management to view and change disk partitioning. 3 The operating system resides on the C partition. This must be the only Primary partition. You must configure all other partitions (D, F, G, and so on) as Logical drives within Extended partitions on basic disks. The following steps offer some guidelines on creating extended partitions and logical drives:	

Install Windows Server 2003		
Step	**Details**	✔
Format all disk drives (continued).	a. Right-click each disk that you want to configure. b. In the resulting menu, choose Create Partition. c. Follow the prompts in the Create Partition Wizard to create an extended partition for each disk. d. When you have created the extended partitions, you must create the logical drives by specifying their size and drive letters. Right-click each disk. e. In the resulting pop-up menu, choose Create Logical Drive. f. Follow the prompts in the Create Partition Wizard to create logical drives for each disk. **Note:** When you right-click a disk, if you see Write Signature in the pop-up menu, then you must choose this option to write a disk signature before you proceed with creating partitions and logical drives.	
12 Install any additional drivers required for your hardware configuration.	If your server requires any additional drivers for your hardware configuration, install them.	
13 Test the network connection.	Use the ping command to test both the CLAN and ELAN network connections.	
14 Install the Windows Server 2003 service pack and any Nortel-approved hotfixes.	Install the latest Windows Server 2003 service pack that has been validated with Symposium Call Center Server. You can obtain this information from the *Symposium Service Packs and Security Hotfixes Compatibility List* (Available on the Partner Information Center web site).	

Install Windows Server 2003		
Step	**Details**	✔
15 Update the emergency repair disk.	Nortel recommends that you restart the computer and update the emergency repair disk to record the latest configuration data for the server. Do this every time you change the server configuration (for example, if you change the computer name or IP address). **TIP:** 1 From the Start menu, choose All Programs → Accessories → System Tools → Backup. 2 Follow the on-screen instructions to select what you want to back up.	
16 Install the Internet Group Management Protocol patch from Microsoft.	After you install Windows Server 2003, depending on your version of the software, you must download and install the Internet Group Management Protocol (IGMP) patch from Microsoft to receive multicast data properly. To download and install the patch, and to find out which versions of the Windows Server 2003 software require it, you must contact Microsoft Product Support Services, as described in the Knowledge Base article listed in the following site: http://support.microsoft.com/default.aspx?scid=kb;en-us;815752 **Note:** If your version of Windows Server 2003 requires this patch, but you do not install it, your server will not reliably receive multicast data from the server in Symposium Call Center Server.	
17 Activate Windows.	Make sure to activate the Windows Server 2003 operating system within 60 days. This enables you to receive support and updates from Microsoft.	

Once you have installed and configured Windows Server 2003, proceed to "Step 4. Make sure the computer name and DNS host name match" on page 118.

Step 4. Make sure the computer name and DNS host name match

Introduction

You must make sure that your server's computer name and DNS host name match exactly, including uppercase and lowercase letters. If these names do not match, you cannot install the Symposium Call Center Server database software.

A mismatch in these names can occur, for example, if you perform a new installation of the operating system and enter the computer name in uppercase letters. Windows uses your entry to set both the computer name and the DNS host name. However, once the operating system installation is complete, you may find that Windows has set the DNS host name in uppercase letters as you entered it, but that the computer name is set in all lowercase letters. Use the following procedures to check the names and, if necessary, change them.

To make sure the computer name and DNS host name match

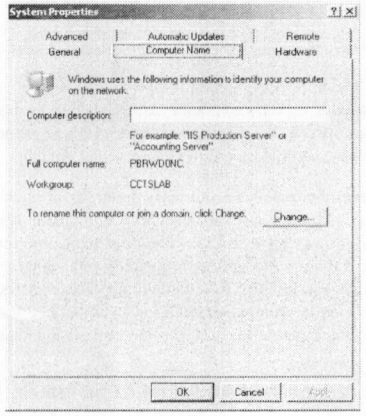
1 Once you have installed the operating system, log on to the server as **Administrator**.

2 From the Start menu, choose Control Panel, and then click the System icon.

Result: The System Properties window appears.

3 Click the Computer Name tab.

Result: The Computer Name information appears.



4 Write down the Full computer name exactly as it appears, including case.

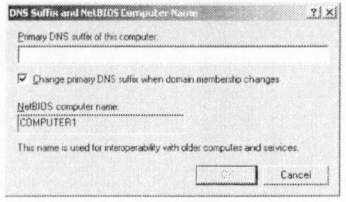
Note: Ignore the period at the end of the Full computer name.

5 Click Change.

Result: The Computer Name Changes window appears.

6 Click More.

Result: The DNS Suffix and NetBIOS Computer Name window appears.



7 Compare the NetBIOS computer name on this window with the Full computer name that you wrote down to determine whether the names match exactly, including case.

8 Do one of the following:

- If the names match, close the windows you opened and continue with the configuration of your server.
- If the names do not match, complete the following procedure.

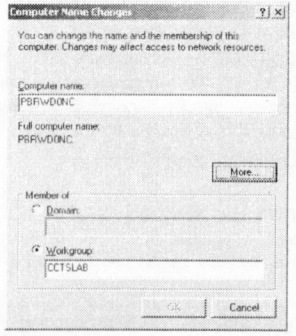
To update the computer name to match the DNS host name

Note: This procedure is a continuation of the previous procedure.

1 Write down the NetBIOS computer name exactly as it appears.

2 In the DNS Suffix and NetBIOS Computer Name window, click Cancel.

Result: The Computer Name Changes window appears.



3 In the Computer name box, type the NetBIOS computer name exactly as you wrote it down in step 1, and then click OK.

Note: If the only difference between the two names is the case (uppercase or lowercase letters), you cannot click OK to register the change because Windows does not recognize changes to case. In this situation, perform the following workaround:

a. Type any character at the end of the Computer name to enable the OK button.

b. Click OK.

c. When the system prompts you to restart, click OK, but do not restart the server.

Result: The System Properties window appears.

d. Click Change.

e. Go back to step 3 above.

Result: The system prompts you to restart.

4 Click OK.

5 Click OK to close the System Properties window.

Result: The system prompts you to restart the server.

6 Click Yes.

7 When the system has restarted, log on to the server as **Administrator**.

8 To make sure the names match now, repeat the procedure "To make sure the computer name and DNS host name match" on page 118.

Step 5. Configure the operating system for remote access (standalone)

Introduction

ATTENTION

If you are installing a coresident server, skip this step and proceed to "Step 6. Install pcAnywhere version 11.0.1," on page 129. For remote support options for a coresident server, see "Remote access support and coresidency," on page 37 for details.

To enable support personnel to connect to the server remotely, you must configure remote access on the server. This section shows you how to configure the operating system for a workgroup only. If you are adding your server to a domain after installing Symposium Call Center Server, follow the steps in "Step 14. Add server to domain (optional)," on page 181 on configuring remote access in a domain environment.

If you have installed a USB modem for remote access, see Appendix D, "Connecting to a USB modem," on page 1296.

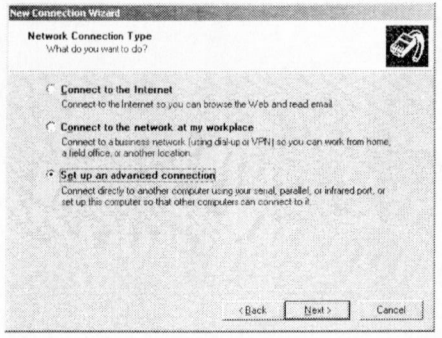
To configure the operating system for remote access (workgroup)

1 From the Start menu, choose Control Panel → Network Connections → New Connection Wizard.

Result: The New Connection Wizard appears.

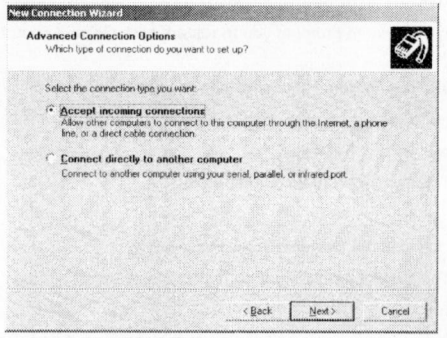
2 Click Next.

Result: The Network Connection Type window appears.



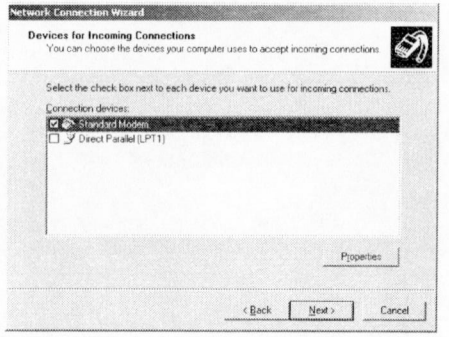
3 Click Set up an advanced connection, and then click Next.

Result: The Advanced Connection Options window appears.



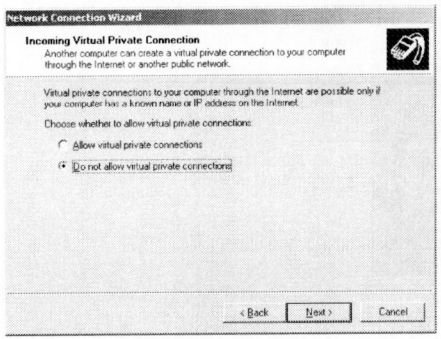
4 Make sure Accept incoming connections is selected, and then click Next.

Result: The Devices for Incoming Connections window appears.



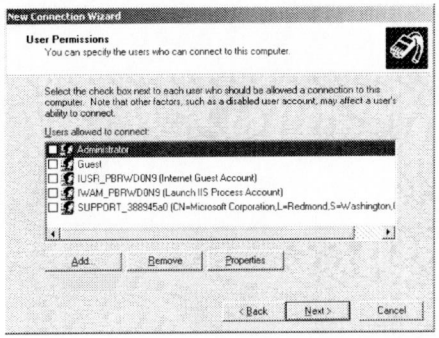
5 Ensure that the server's modem appears in the Connection devices box with a check mark beside it, and then click Next.

Result: The Incoming Virtual Private Connection window appears.



6 Click Do not allow virtual private connections, and then click Next.

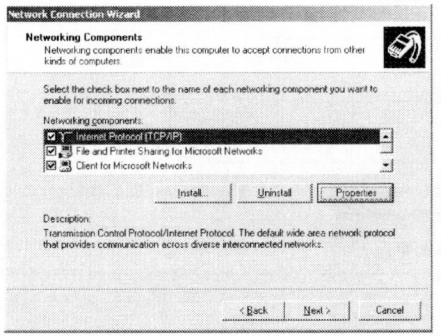
Result: The Select Users or Groups window appears.



7 Click the box to place a check mark beside the user Administrator, and then click Next.

Note: After you install the Symposium Call Center Server software, three additional users appear in this box: NGenSys, NGenDesign, and NGenDist. You must ensure that there are check marks beside these names as well to enable these users to connect to the server remotely. For more information, see "To configure the operating system for remote access (workgroup)" on page 123.

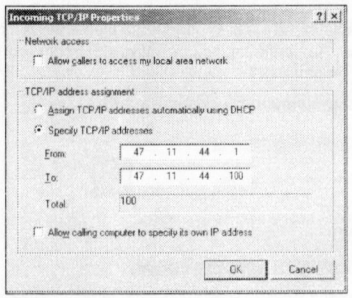
Result: The Networking Components window appears.



8 Ensure that there are default check marks beside the three components, as shown in the preceding illustration.

9 In the Networking components box, highlight Internet Protocol (TCP/IP), and then click Properties.

Result: The Incoming TCP/IP Properties window appears.



10 Ensure that the check box beside Allow callers to access my local area network is *not* checked.

11 Select the Specify TCP/IP addresses option.

12 In the From and To boxes, you must specify a range of IP addresses in the same subnet as the CLAN IP address. This range must include at least two available IP addresses.

Note: Obtain the range of addresses from your network administrator. Remote access uses the first IP address. The remaining IP addresses are loaned to each dial-in client. Your administrator must select the range carefully.

13 Ensure that the check box beside Allow calling computer to specify its own IP address is *not* checked.

14 Click OK.

15 In the Networking Components window, click Next.

Result: The Completing the Network Connection Wizard appears.

16 Click Finish.

Result: The new connection appears in the Network and Dial-up Connections folder.

Step 6. Install pcAnywhere version 11.0.1

Introduction

One licensed copy of pcAnywhere version 11.0.1 for host computers only is provided for the server on the NTJK08BA pcAnywhere Host-Only CD. This software license enables you to configure the server as the host computer in remote control sessions (that is, the computer to which remote computers connect).

1. To install the remote format of pcAnywhere version 11.0.1 on the server, you must purchase a remote license for the server. Since most users only require that the server act as a host computer, this chapter outlines the installation and configuration of only the host format of the pcAnywhere software. For information on the installation and configuration of the remote format, consult the pcAnywhere web site at www.symantec.com/pcanywhere.
2. To install pcAnywhere version 11.0.1 on the client PC, you must purchase a separate license for the client PC.
3. You do not have to manually uninstall previous versions of pcAnywhere before installing pcAnywhere 11.0.1; the pcAnywhere 11.0.1 installation wizard automatically uninstalls previous versions of pcAnywhere before continuing with the installation.

   Note: You may be required to restart the server after uninstalling a previous version of pcAnywhere.

   If the installation wizard asks if you want to preserve configuration data from a previous version after the uninstallation, select No. Configuration data from previous versions of pcAnywhere is incompatible with pcAnywhere version 11.
4. You need Microsoft Internet Explorer 5.5 SP2 or later to run pcAnywhere. The installation program for pcAnywhere 11.0.1 checks your system for IE5.5 SP2 or later before proceeding with the installation. If it is required, you can obtain IE5.5 SP2 from the NTJK08BA CD.

To install pcAnywhere version 11

1. Log on to the server as **Administrator**.

   Note: If you have already installed the Symposium Call Center Server software and you are now reinstalling pcAnywhere, then before you proceed with the installation, you must shut down all the services on the server. From the Start menu, choose Programs → Symposium Call Center Server → Shutdown. To shut down the services, perform the following procedure:

   a. From the Start menu, choose Programs → Symposium Call Center Server → Shutdown.

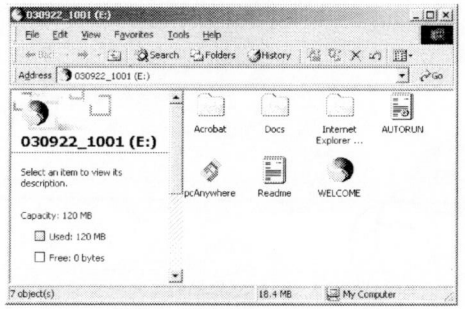
      Result: The Symposium Call Center Server Shutdown window appears.

   b. Click OK to confirm.

      Result: The Symposium Call Center Server services shut down. This may take several minutes.

   c. When the Service Status log window appears, click Accept to exit the utility.
2. Insert the Release 11.x pcAnywhere Host-Only CD-ROM (NTJK08BA) into the CD-ROM drive.

   Result: The pcA_11_0_HostOnly window appears.



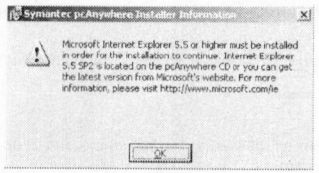
3 Double-click Readme.txt.

Result: The Readme.txt file opens.

4 Read the installation notes contained in the Readme.txt file, and then close the file.

5 Double-click pcAnywhere.exe.

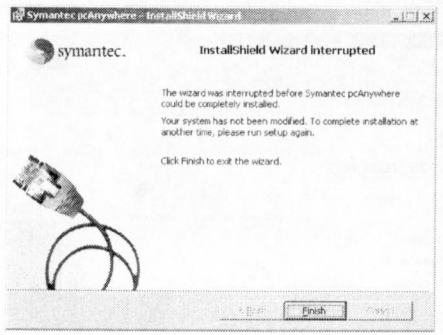
Result: The installation wizard starts. If you do not have Internet Explorer 5.5 SP2 or later, the following message appears:



6 Skip to step 7 if you do not see the preceding message; otherwise, do the following:

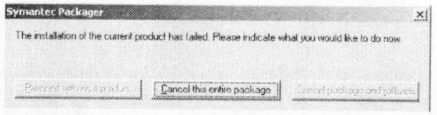
a. Click OK.

Result: The InstallShield Wizard interrupted window appears.



b. Click Finish.

Result: The Symantec Packager window appears.

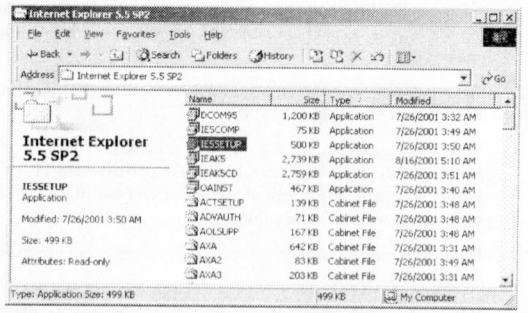


c. Click Cancel this entire package.

d. On the pcA11_0_HostOnly window, double-click the Internet Explorer 5.5 SP2 folder.

Result: The Internet Explorer 5.5 SP2 folder opens.

e. Double-click IE5SETUP.



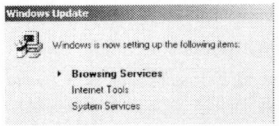
f. Accept the license agreement, and then click Next.

g. Click Next to start the installation.

h. When prompted to restart the computer, close all other windows first, and then click Finish.

i. After the computer restarts, log on as **Administrator**.

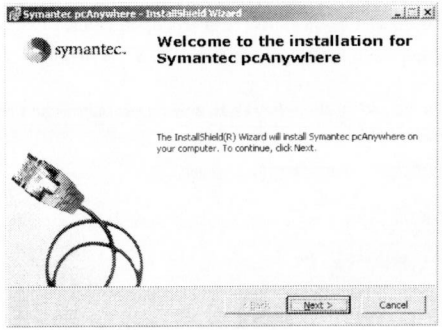
Result: The Windows Update sets up and completes the IE5.5 SP2 installation.



j. Resume the pcAnywhere 11.0.1 installation by first making sure the NTJK08BA CD is in the CD-ROM drive.

k. Navigate to the root directory of the CD, and then double-click pcAnywhere.

7 Click Next when the following Welcome window appears:



Result: The license agreement window appears.

8 Click Accept to accept the license agreement, and then click Next.

Result: The Customer Information window appears.

9 Enter your user name and organization, and then click Next.

Result: The Destination Folder window appears.

10 Click Next to install pcAnywhere in the default location.

Result: The Ready to Install window appears.

11 Click Install.

Result: The Installation Progress window appears.

12 Click Finish when the installation is complete.

13 Close the drive E:\ directory window and remove the CD from the CD-ROM drive.

Note: You do not need to restart the server computer.

To configure pcAnywhere user access rights

This section describes how to configure pcAnywhere to accept remote connections. When you first receive your server, pcAnywhere may already be configured. If so, go through the following procedures to ensure that the network properties and remote caller settings are correct.

Configuration of pcAnywhere sets up a secure caller account to access the server. You can add a caller account for each remote PC. These caller accounts restrict usage of pcAnywhere to appropriate users (for example, Nortel support personnel and distributors).

If, during the pcAnywhere configuration, you get a message indicating that you do not have the rights to modify a setting or create a new caller, follow the procedure below to change the Windows User access rights for pcAnywhere files.

1 Exit pcAnywhere.

Tip: This procedure requires you to browse to a hidden directory. To view hidden directories, follow these steps:

a. Open My Computer.

b. Choose Tools → Folder Options.

c. Click the View tab.

d. Scroll down until you see Show Hidden Files and Folders, and then select this option.

e. Click OK.

2 In Windows Explorer, navigate to the following folder:

C:\Documents and Settings\All Users\Application Data\Symantec\pcAnywhere

where C: is the drive on which pcAnywhere is installed.

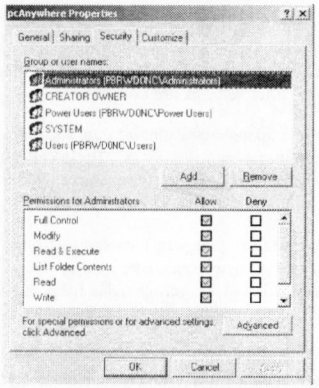
3 Right-click the pcAnywhere folder icon.

Result: A pop-up menu appears.

4 On the pop-up menu, click Properties.

Result: The pcAnywhere Properties window appears.

5 Click the Security tab.



6 In the Name box, highlight Administrators.

7 To grant administrators full access to the pcAnywhere folder, in the Permissions box, ensure that there is an Allow check mark beside Full Control.

8 Click OK to save your changes and close the Properties window.

To optimize the server for pcAnywhere

1 Right-click your mouse on the server's desktop.

2 On the right-click menu, point to Active Desktop, and then make sure the "Show Web Content" option is not selected.

To configure pcAnywhere as a host

1 Log on to Windows as **Administrator**.

2 From the Windows Start menu, choose Programs → Symantec pcAnywhere.

Note: If the system asks you to register pcAnywhere, click Skip, and then choose Yes when asked to confirm.

3 On the pcAnwhere manager (left side), select the Hosts option.

Result: The Hosts option on the pcAnywhere manager pane is highlighted.

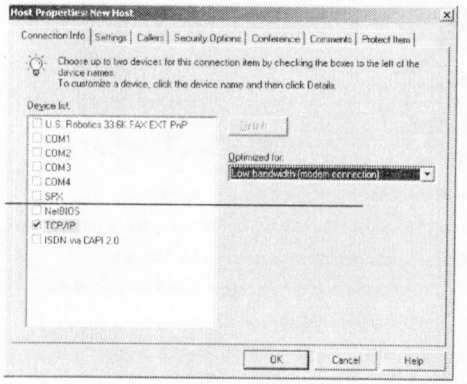
4 Click the File menu, and then choose New → Item → Advanced.

Note: Do not use the Wizard option.

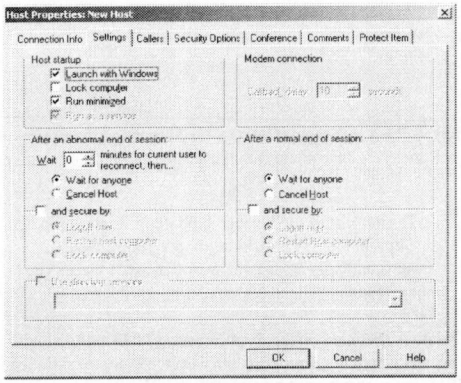
Result: The Host Properties: New Host window appears.

5 On the Connection Info tab, ensure that only the TCP/IP check box is selected.

6 From the Optimized for drop-down box, select Low bandwidth (modem connection).



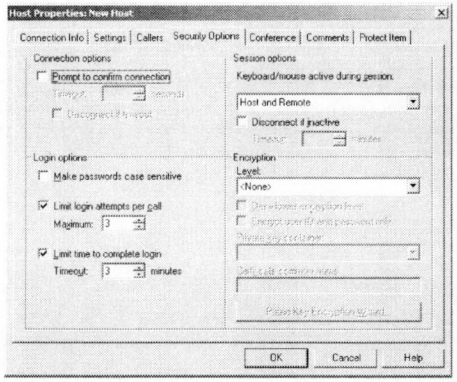
7 Click the Settings tab.



8 In the Host startup area, ensure that the Launch with Windows and Run minimized check boxes are selected.

9 Click the Security Options tab.

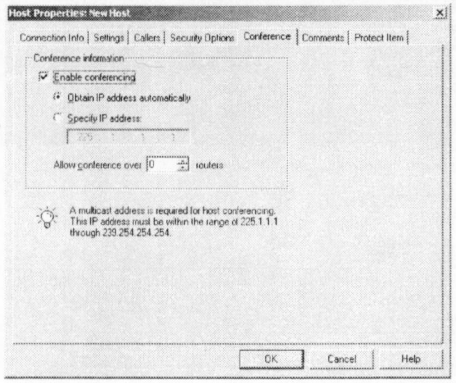
10 Ensure that the settings are as shown in the following example:



11 If you made changes, the Apply button appears. Click Apply if you have made any changes.

12 Click the Conference tab.

13 Ensure that Enable conferencing and Obtain IP address automatically are selected, as shown in the following example:



14 Click the Protect Item tab if you want to protect the settings for this caller account by assigning a password to control access to the settings. If you do not want to assign a password, skip to step 17.

15 In the Password box, type the password you want to use to protect the Network icon settings.

16 In the Confirm password box, type the password again.

ATTENTION

If you select the Required option to modify properties, you must enter the password each time a setting is changed. You should record the password and keep a copy of it in a safe place. If you forget the password, you cannot change any settings.

17 Click OK to apply all pcAnywhere Host PC settings.

Result: The Host List window appears.

18 Enter an appropriate name for the host that you just set up.

19 Click Exit to close the pcAnywhere Manager window.

Step 7. Copy the latest Service Update to the server

Introduction

Before you install the Symposium Call Center Server software, copy the latest Service Update and Service Update Supplement to drive D on your server.

ATTENTION

Do not install the Service Update or Service Update Supplement! The installation program installs it automatically during the installation of the server software.

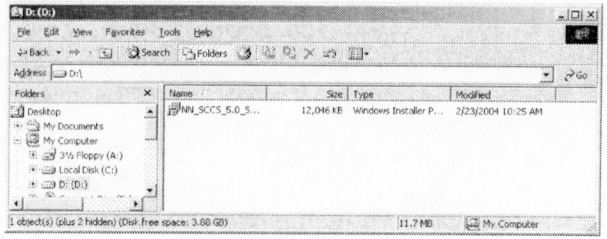
A Service Update is included on the Supplementary CD shipped with your software. However, check for a more recent Service Update on the Enterprise Solutions PEP Library web site at http://www.nortelnetworks.com/espl.

To copy the latest Service Update to the server

1 Insert the Supplementary CD into the CD-ROM drive.

Note: If you are installing from a remote CD or a network shared drive, map the CD to a drive letter on the server.

2 Navigate to the Supplementary CD or the shared drive and copy the service update (for example, NN_SCCS_5.0_SU_04_S.msi) to the root of the server's drive D)



You have completed the preinstallation section. Next, proceed to Section B: "Installation" on page 143 to install Release 5.0 of Symposium Call Center Server.

Section B: Installation

In this section

Overview

Introduction

The time needed to install the server software depends on the server's CPU speed and database size.

Note: As an example, one installation of a server (512 Mbytes RAM, dual Pentium III 500 MHz processors, five database partitions of 4 Gbytes each) took approximately 6 hours. This included operating system installation, disk partitioning, Symposium Call Center Server software installation and configuration, pcAnywhere installation, and the installation of one client PC. This did not include time required for pre-installation planning, switch configuration, or post-installation setup and configuration, such as adding agents or configuring agents to skillset assignments.

Before installing the server software

Before installing the server software, check off the items in the following checklist to ensure that you have performed all the required preinstallation steps:

Steps	✔
1 Ensure that the switch is properly configured and has the latest PEP applied to it. Refer to your switch documentation for instructions.	
2 Make sure that your server is configured properly.	
3 Install pcAnywhere 11.0.1.	
4 Copy the latest Service Update to drive D (root level) of the server.	

Steps	✔
5 For DMS/SL-100 systems, ensure that the dongle is attached properly. The Symposium Call Center Server installation package includes a dongle, which consists of a parallel port adapter and iButton. The dongle verifies that you have the software package that was purchased for this system. You can set up and test Symposium Call Center Server without the dongle. However, before you connect to the switch to go live, you must ensure that the dongle is attached to the parallel port on the back of the server. Without the dongle, the switch and the server cannot communicate. If you are using a USB iButton dongle, see Appendix E, "Using a USB iButton dongle," on page 1300.	
6 Make sure no third-party software is installed. Nortel recommends that you do not install any third-party software on your Symposium Call Center Server. This can compromise system performance. Exceptions are pcAnywhere software, which is required for remote support, and antivirus software, which is required for security purposes.	

Installing software for a Network Control Center server

The procedures in this chapter also apply to Network Control Center servers. The steps are the same, with the following exceptions:

- During the software installation, the setup program prompts you to select the type of server you want to install. You must select a Network Control Center server.
- During the configuration of the server and database, the configuration utility does not prompt you for ELAN networking information, since a Network Control Center server does not use an ELAN. The configuration utility does not prompt you for switch information either.

Step 8. Install the product software and database

Introduction

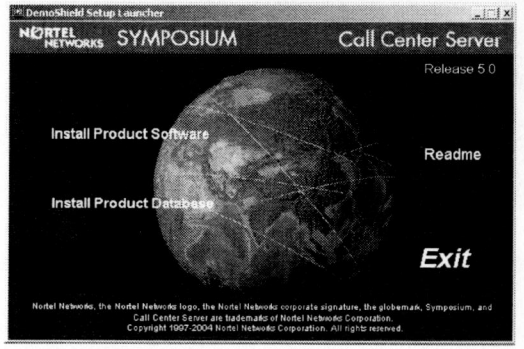
Once you have completed steps 1 to 7 of the preinstallation stage, you are ready to begin installing the server software.

To install the product software and database

1 Log on to the server as **Administrator**.

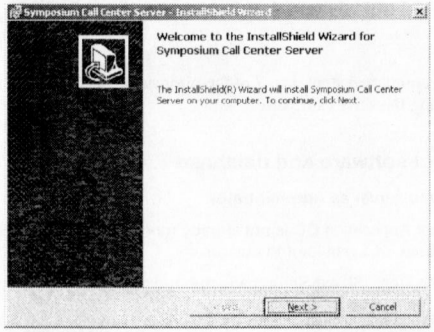
2 If the Server Application CD is not already running, insert the CD into the CD-ROM drive and wait for it to autorun.

Result: The DemoShield Setup Launcher main menu appears.



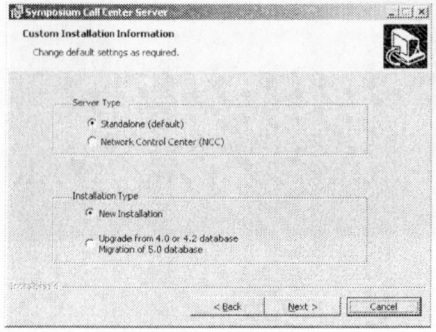
3 Click Install Product Software.

Result: The welcome window for Symposium Call Center Server InstallShield Wizard appears.



4 Click Next.

Result: The Custom Installation Information window appears.



5 In the Server Type section, do one of the following:

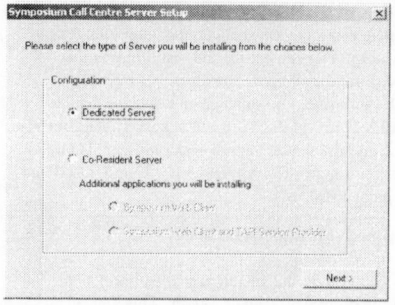
- If the server is *not* an NCC server, leave the server type as Standalone.

- If the server is an NCC server, select Network Control Center.

6 In the Installation Type section, leave the selection as New Installation.

7 Click Next.

Result: The dedicated or coresident selection window appears.

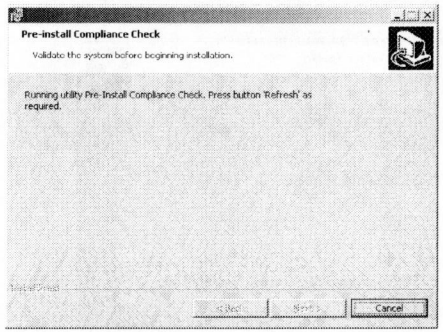


8 Do one of the following:

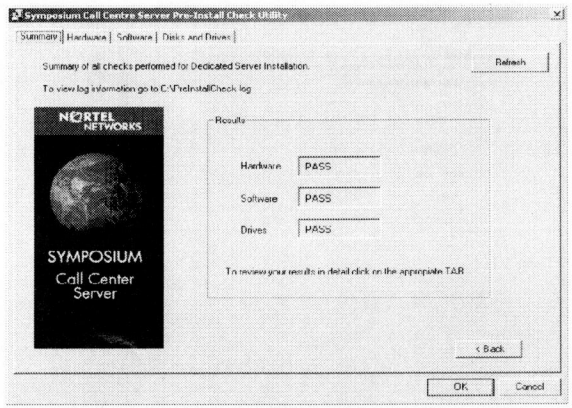
a. To install a standalone server, make sure Dedicated Server is selected, and then click Next.

b. To install a coresident server, click Co-resident Server, select either Symposium Web Client or Symposium Web Client and TAPI Service Provider, and then click Next.

Result: The Pre-install Compliance Check window appears.



After a few seconds, the Pre-Install Check Utility window appears.



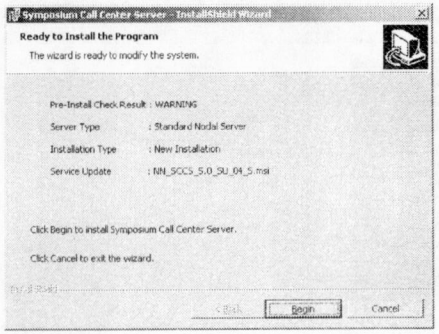
Result: The system checks your server to ensure it meets the requirements for Symposium Call Center Server. The results appear in a window similar to the preceding graphic. If your server is compliant, the Results group shows Pass beside all items listed. For any items that can cause your installation to fail, the Status column shows Error. For items that will not cause the installation to fail but may cause some components to fail, the Status column shows Warning. For items that stop the installation from continuing until you correct the problem, the Status column shows Critical.

9 Click the appropriate tabs to view more details about the compliancy results.

10 Make changes to your hardware or software items as necessary, and click Refresh on the Pre-Install Check Utility window to update the Status.

11 After making any necessary changes, click OK to proceed with the installation.

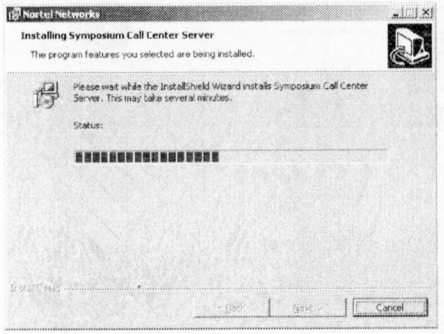
Result: The Ready to Install the Program window appears.



Note: If you click Cancel at any time during the product software installation, the InstallShield Wizard Complete window appears. The text on this window warns you that the software was not successfully installed.

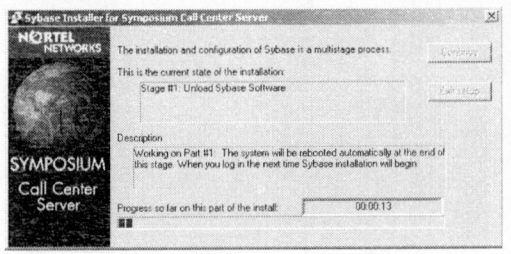
12 Click Begin.

Result: The Installing Symposium Call Center Server window appears.



After a few seconds, the Sybase installation window appears. The system copies the Sybase software files to the server. After 3 to 5 minutes of installation, the system restarts.

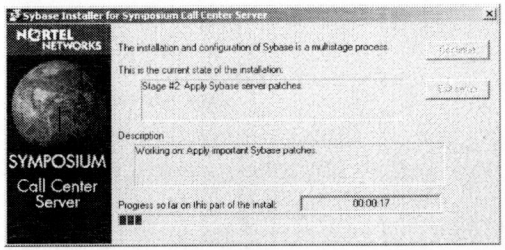
Stage 1



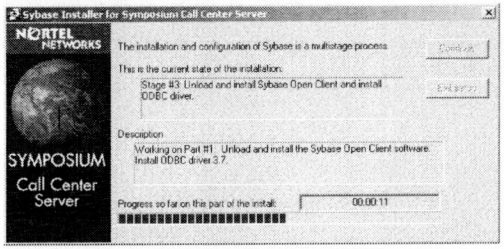
13 After the system restarts, log on as **Administrator**.

Result: The installation of the Sybase software and the Symposium Call Center Server software continues. The system displays windows showing the different stages (Stage 1 to 5) of the installation. This is an automated installation with no user intervention required until Step 14. The installation time of this step may range from 1 to 3 hours, depending on your system.

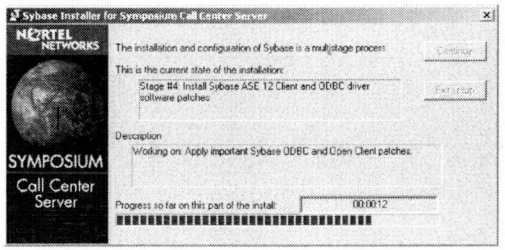
Stage 2



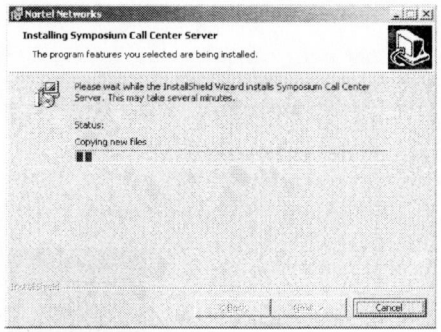
Stage 3



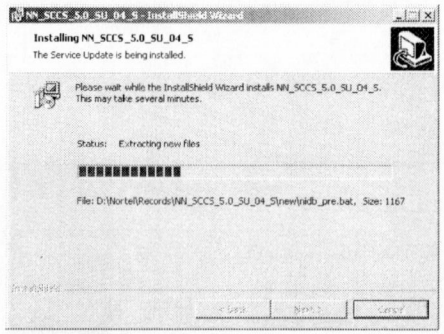
Stage 4



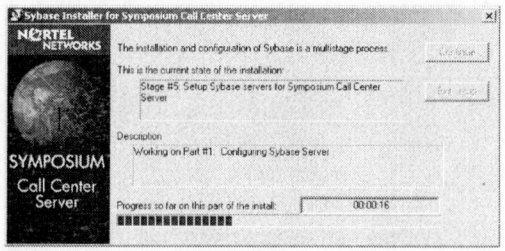
The system copies files to drive D.



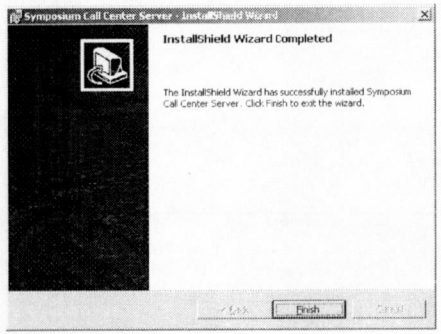
The system installs the Service Update.



Stage 5 (This stage has 6 parts and the system creates the database).

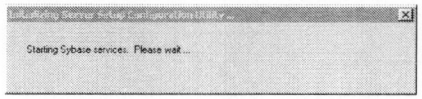


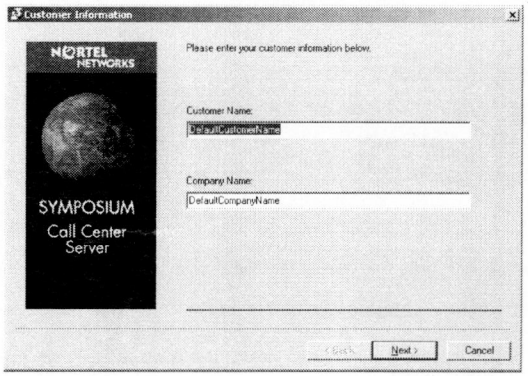
14 Wait until you see the following window (this window may appear behind the Customer information window):



15 Click Finish.

Result: The product software and database are installed. The installation program automatically continues and the Initializing Server Setup Configuration Utility message appears (for between 5 seconds to 5 minutes) before the Customer Information window appears.





What's next?

Proceed to "Step 9. Configure the product software" on page 158 to configure the software and database.

Step 9. Configure the product software

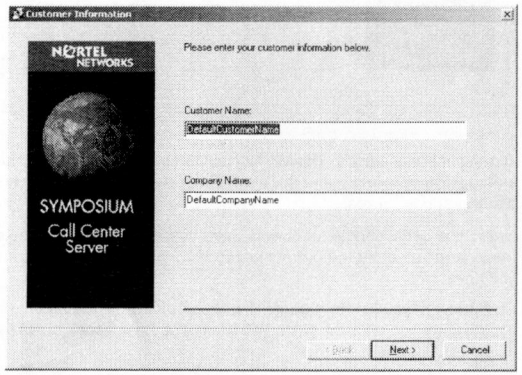
Introduction

Once you have installed the server software, you need to configure the product software before the server services start running.

To configure the product software

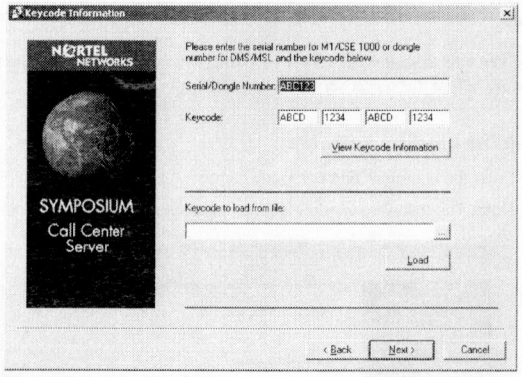
1 Enter the customer and company names.

Note: The following window is a continuation of the previous procedure.



2 Click Next.

Result: The Keycode Information window appears.



3 Type your serial number (for M1/Nortel Communication Server 1000 switches) or dongle number (for DMS/SL-100 switches), and the keycode in the appropriate boxes.

Note: The serial/dongle number is used in the generation of the keycode. Make sure you enter the correct keycode for the serial/dongle number that you have.

4 Click View Keycode Information to view a window displaying the details of the keycode you entered. Click Yes to accept the keycode or No to change it.

5 When you have validated that you have the correct keycode, click Next and skip to step 6.

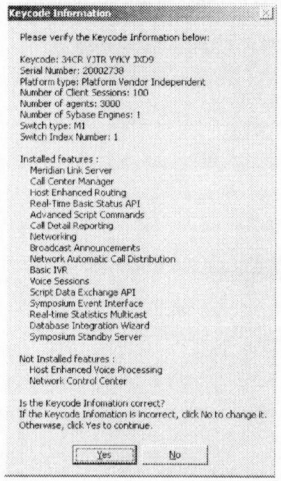
Note: If the system cannot validate your entries, it displays an error message. Do the following:

a. Click OK on the error message(s).

b. Check your entries in the Keycode Information window, and make any corrections.

c. Click Next.

Result: If you entered a valid keycode and serial/dongle number, the system displays a window similar to the following one:

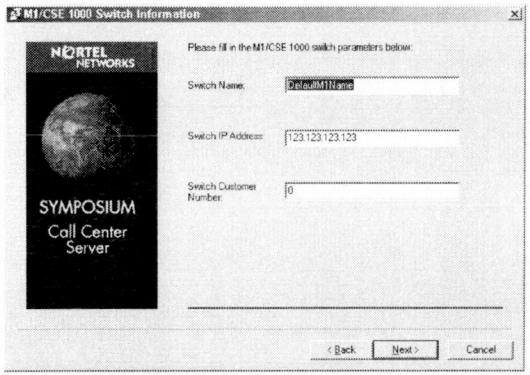


6 Check that the features listed match the product you purchased, and then do one of the following:

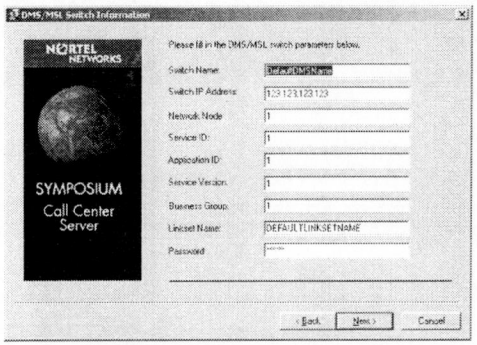
- If the information is not correct, you may have entered the keycode and serial/dongle number incorrectly. Click No and go back to step 3.
- If the information is correct, click Yes to continue.

Result: The Switch Information window appears for the type of switch identified by your keycode. This can be either the M1/Nortel Communication Server 1000 Switch Information window or the DMS/SL-100 Switch Configuration window. The M1/Nortel Communication Server 1000 Switch Information window is shown in the following example.

Note: If you are installing a Network Control Center (NCC) server, the switch information window does not appear.



If you are using a DMS/SL-100 switch, the following window appears instead.



7 Enter the appropriate information for your switch.

Note: The following restrictions apply to switch names:

ATTENTION For a DMS/SL-100 switch, the Linkset Name *must* be entered in uppercase only.

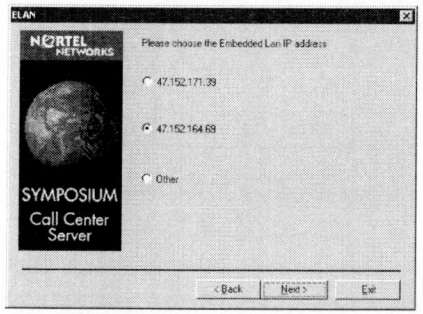
- Valid characters for switch names are A–Z, a–z, 0–9, _ (underscore), and . (period).
- Switch names must begin with an alphabetical character and cannot contain spaces.
- The last character must not be an underscore or a period.
- Switch names must not exceed 80 characters in length.

Tip: If you are unsure of the correct information or if you make a mistake, you can change the switch information after you finish the installation (see "Feature Report" on page 1109).

8 Click Next.

Result: The ELAN window appears.

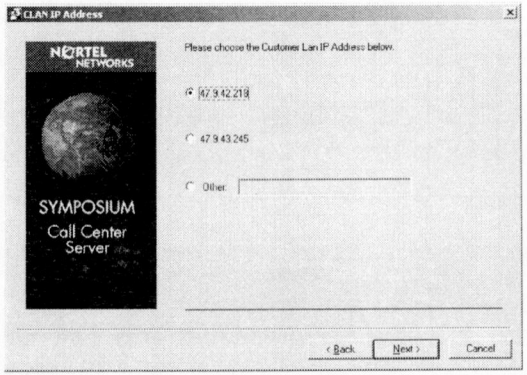
Note: If you are installing a Network Control Center server, the configuration utility bypasses this window and displays the CLAN IP Address window. Skip to step 11 of this procedure.



9 Click the option button beside the correct IP address for your ELAN. If none of the addresses are correct, click Other, and then type the IP address.

10 Click Next.

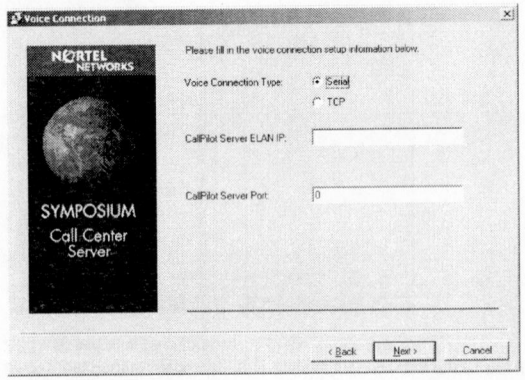
Result: The CLAN IP Address window appears.



11 Click the option button beside the correct IP address for your CLAN. If none of the addresses are correct, click Other, and then type the IP address.

12 Click Next.

Result: The Voice Connection window appears.



13 Based on the voice processing system you are using, complete this window as follows:

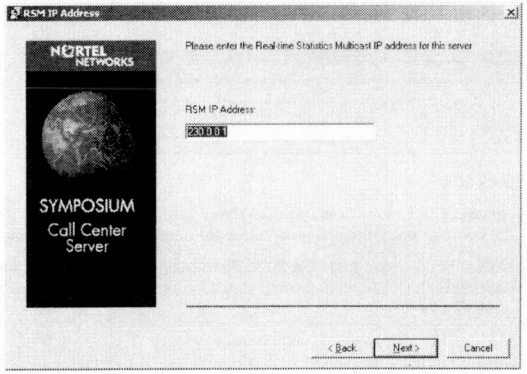
- If you are not using an integrated voice processing system (Meridian Mail or CallPilot), for Voice Connection Type, select Serial, and then click Next.

  Note: If your computer is not configured with COM2, for Voice Connection Type, select TCP, enter a dummy IP address and port number, and then click Next.

- If you are using Meridian Mail as your voice processing system, for Voice Connection Type, select Serial, and then click Next.
- If you are using CallPilot, for Voice Connection Type select TCP. Specify the ELAN IP address of the CallPilot server, and set the CallPilot Server Port to 10008. Then click Next.
- Although Symposium Call Center installs on a server without a COM 2 serial port, the hardcoded dependency in the MAS Access Link service can cause the Access Link Handler to restart continuously if you do not configure the COM2 port. For a Symposium Call Center Server that

does not require the ACCESS Link connection to Meridian Mail, enter a dummy IP address and port number in the Voice Connection tab.)

Result: The RSM IP Address window appears.

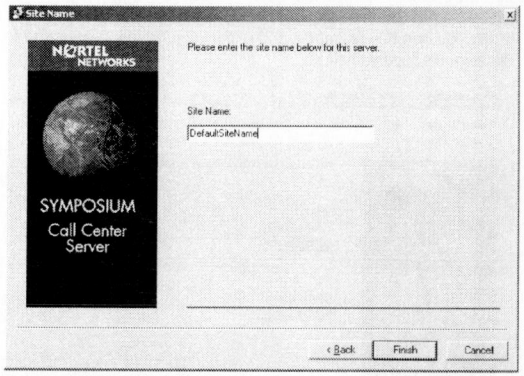


14 Enter the RSM IP address that you want to associate with the sending of real-time statistical data. This address is referenced by other applications, such as Symposium Web Client, that need access to real-time statistical data. The default RSM address is 230.0.0.1. You can use a different address, provided that it is within the range of valid RSM IP addresses. You must configure RSM for a coresident server. For more information, see Chapter 22, "Installing and configuring Real-time Statistics Multicast."

Note: The RSM IP address should not be confused with, and is separate from, your server's CLAN or ELAN addresses.

15 Click Next.

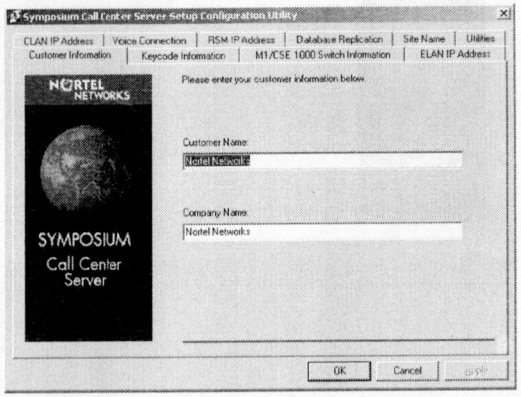
Result: If your keycode includes the Symposium Standby Server feature, the Database Replication window appears. See"Configure the Active Server" on page 1219 for more information on how to configure the Symposium Standby Server feature for your system. Otherwise, the Site Name window appears.



16 Enter a site name for the server, and then click Finish.

Tip: The site name must not contain spaces or non-alphabetical characters except for - (hyphen) and _ (underscore). The first character must be a letter. The site name must be unique and can consist of any combination of a minimum of 6 and up to 15 characters.

Result: The Symposium Call Center Server Setup Configuration Utility window appears. It contains a tab for each of the windows in which you entered information during the configuration. (It also contains a Utilities tab, which you can use to import and export configuration data and to create a Platform Recovery Disk.)



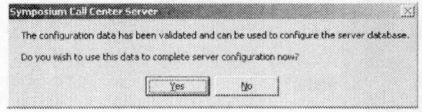
Note: Depending on your keycode, the following tabs may not appear:

- M1/Nortel Communication Server 1000 or DMS/MSL Switch Information
- Voice Connection (**Note:** Although Symposium Call Center installs on a server without a COM 2 serial port, the hardcoded dependency in the MAS Access Link service can cause the Access Link Handler to restart continuously if you do not configure the COM2 port. For a Symposium Call Center Server that does not require the ACCESS Link connection to Meridian Mail, enter a dummy IP address and port number in the Voice Connection tab.)
- Database Replication

17 Click each tab and check that the information is correct. Make any necessary corrections.

18 Click OK to save your changes.

Result: The following message appears, asking if you want to use the (configuration) data to complete the server configuration.



19 Click Yes.

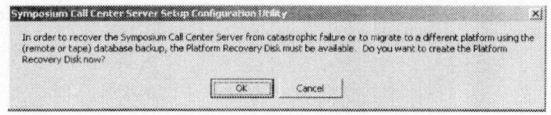
Result: The Server Configuration Utility configures your server using the data you entered. It displays a status for each stage of configuration.

Note: This process can take 20 to 30 minutes to complete, depending on your server's CPU and database size. Do not close any windows during the configuration.

20 Wait until you see the following message:

21 Click OK.

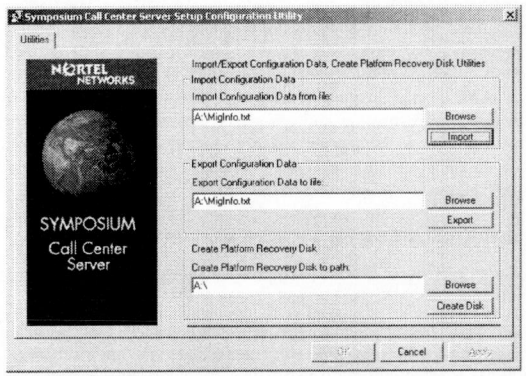
Result: The following message appears:



22 Click OK.

Note: If you click Cancel, remember to use the Migration utility to create a Platform Recovery Disk when the installation is complete. Skip to the Result in step 27.

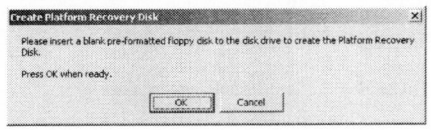
Result: The Utilities tab appears.



23 In the Create Platform Recovery Disk section, do one of the following:

- To save the Platform Recovery Disk to a floppy disk:
  - **a.** Insert a blank floppy disk in drive A.
  - **b.** Click Create Disk.

    Result: The following message appears:



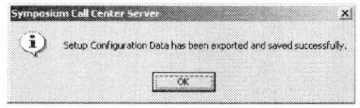
  - **c.** Click OK.
- To save the Platform Recovery Disk to a remote directory:

  - **a.** Map a network drive to the remote directory.

    Note: The name of the remote directory into which you save the Platform Recovery Disk must not contain any spaces. Spaces in the remote directory name cause errors.
  - **b.** Click Browse, and then navigate to the mapped network drive.
  - **c.** Select the drive, and then click OK.
  - **d.** Click Create Disk.

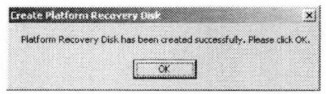
    Result: The system creates the Platform Recovery Disk.

24 Wait until the following message appears:



25 Click OK.

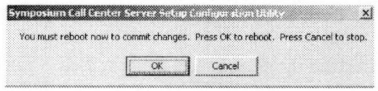
Result: The Platform Recovery Disk created successfully message appears.



26 If you used a floppy disk, remove it from the drive. Make sure the Platform Recovery Disk is labeled appropriately and stored in a safe place.

27 Click OK to close the Symposium Call Center Server Setup Configuration Utility window.

28 If you selected the option to perform a standalone installation, the following message appears. If you selected the option to perform a coresident installation, skip to "To continue with the coresident installation" on page 171.



29 Click OK.

Result: The server automatically restarts.

30 Log on as **NGenSys**.

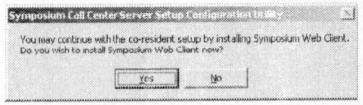
ATTENTION You must log on as NGenSys to perform many server management functions, such as installing PEPs. If you log on to the server as Administrator to perform Windows management functions, when you finish, always remember to log off and log on again as NGenSys.

Note: It may take several minutes for the desktop to appear.

Result: The MAS Trace Window appears. The server and database configuration is complete, and the Symposium Call Center Server software is ready for use.

To continue with the coresident installation

If you selected the option to perform a coresident installation, the following message appears.



1 Click Yes to continue with the coresident setup.

Result: A message prompts you to follow the Symposium Web Client guide to install the Symposium Web Client.

2 Click OK.

Note: If you click Cancel, you can still install Symposium Web Client at a later time.

3 Refer to the *Nortel Symposium Call Center Web Client Planning, Installation, and Administration Guide* to install the Symposium Web Client application.

Note: You must install the Symposium Web Client application on drive C on your computer.

Once you have completed the Symposium Call Center Symposium Web Client installation, you can install TAPI on your server if you selected TAPI at the beginning of the installation. Refer to the *Network Manager's Guide for Symposium TAPI Service Provider for Succession, Release 3.0* to install TAPI on your server.

Note: If you selected to perform a standalone installation, you *cannot* install Symposium Call Center Symposium Web Client on the same server. To convert a standalone installation into a coresident server, you need to first perform a platform migration of the standalone server. Back up the database, uninstall the server software, and then install the Symposium Call Center Server software on the original server, making sure you select "upgrade" instead of "new installation." Select the appropriate coresident option. For more information on how to do a platform migration, see Chapter 11, "Migrating a Release 5.0 server to a new platform" on page 765 of this guide.

To check that the server services start up successfully

From the Start menu, choose Programs → Symposium Call Center Server → System Monitor.

Result: The SMonW window appears and Symposium Call Center Server services begin the startup process. The services take approximately 15 to 20 minutes to start up. For more information about the services and their statuses, see "Troubleshooting problems with Symposium Call Center Server services" on page 1170.

Installing any required PEPs

Install any required PEP now. For more information, see Chapter 15, "Installing/uninstalling patches."

What's next?

Proceed to Section C: "Post-installation" on page 173.

Section C: Post-installation

In this section

Step 10. Change the NGenDist and NGenDesign passwords

Introduction

To protect your system from unauthorized access, change the passwords for the Nortel user accounts as soon as you finish the installation.

NGenDist and NGenDesign are Windows remote access accounts that enable the distributor or Nortel customer support to remotely log on to the server if requested by the customer. These accounts are created during the server software installation. To ensure server security, change the NGenDist and NGenDesign passwords.

Assigning new passwords

To assign new passwords, you do not need to know the default passwords for NGenDist and NGenDesign. For detailed instructions, see "To change the NGenDist, NGenDesign, or NGenSys passwords" on page 974, and "To change the NGenSys password for MAS Backup/Restore service" on page 975.

Password security

Write down the new passwords you create, and store them in a safe, secure place away from the server. Give the passwords only to those who need them.

Step 11. Configure the NGen user groups for remote access (standalone)

Introduction

ATTENTION

If you are installing a coresident server, skip this step and proceed to "Step 13. Verify the success of the installation" on page 180. For remote support options for a coresident server, see "Remote access support and coresidency," on page 37 for details.

If your server computer is on a workgroup, complete this step. If you intend on adding your server to a domain, see "Step 14. Add server to domain (optional)" on page 181 for information on configuring the NGen user groups for remote access in a domain environment.

Symposium Call Center Server software creates three users: NGenSys, NGenDesign, and NGenDist. Enable these accounts for remote access to allow support personnel to access the server remotely with these user accounts.

To configure NGenSys, NGenDesign, and NGenDist for remote access

1 From the Start menu, choose Settings → Control Panel.

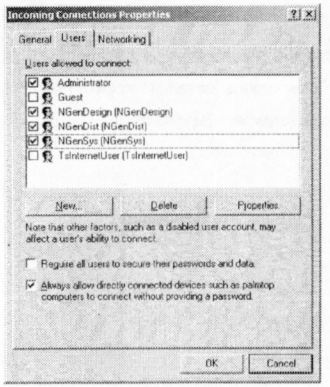
Result: The Control Panel window appears.

2 Double-click Network and Dial-up Connections.

Result: The Network and Dial-up Connections window appears.

3 Right-click the incoming connection that you created in "To configure the operating system for remote access (workgroup)" on page 123, and then choose Properties.

Result: The Incoming Connections Properties window for your connection appears.



4 Click the Users tab.

5 Place a check mark in the check box beside each of the users, NGenDesign, NgenDist, and NGenSys.

6 Click OK to close the window, and then close the Network and Dial-up Connections window.

Step 12. Add NGen names to pcAnywhere (standalone)

Introduction

ATTENTION

If you are installing a coresident server, skip this step and proceed to "Step 13. Verify the success of the installation" on page 180. For remote support options for a coresident server, see "Remote access support and coresidency," on page 37 for details.

If your server computer is on a workgroup, complete this step. If you intend on adding your server to a domain, see "Step 14. Add server to domain (optional)" on page 181 for information on configuring the NGen user groups for remote access in a domain environment.

To add NGenDist and NGenDesign to pcAnywhere 11.0.1

1 Log on to Windows as **Administrator**.

2 From the Windows Start menu, choose Programs → Symantec pcAnywhere.

3 On the pcAnwhere manager (left side), select the Hosts option.

Result: The Hosts option on the pcAnywhere manager pane is highlighted.

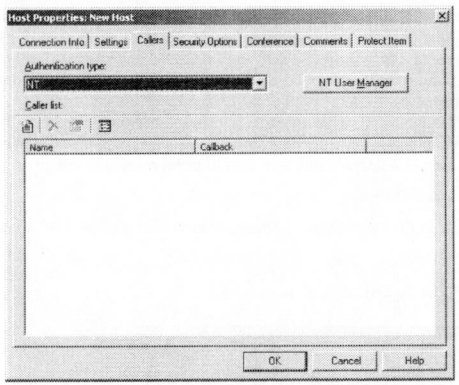
4 Click the File menu, and then choose New → Item → Advanced.

Note: Do not use the Wizard option.

Result: The Host Properties: New Host window appears.

5 Click the Callers tab.

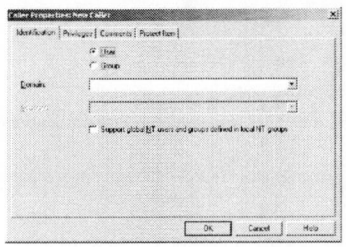
Result: The Callers window appears.



6 From the Authentication type drop-down list, select NT.

7 Below the Caller list heading, click the New item icon ( ).

Result: The pcAnywhere Caller Properties: New Caller window appears.



8 On the Identification tab, ensure that the User option button is selected.

9 From the Domain drop-down list, select the computer name of the server in Symposium Call Center Server.

10 From the Account drop-down list, select NGenDist.

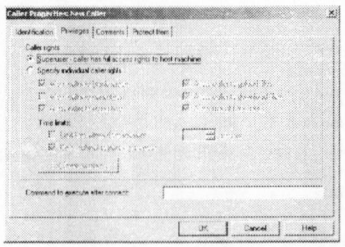
Note: The NGenDist and NGenDesign user accounts are automatically created on the server as Windows user accounts when you install the Symposium Call Center Server software. To allow authorized remote personnel to use pcAnywhere to log on to and administer the server with either of these accounts, you must designate these Windows accounts as valid pcAnywhere caller accounts. By creating this link between Windows and pcAnywhere, you never have to change the passwords for these accounts in pcAnywhere; when you change the passwords in Windows, the information is automatically updated in pcAnywhere to match.

11 Click the Callback tab.

12 Ensure that the check box beside Callback the remote user is not checked.

13 Click the Privileges tab.

14 Click the Superuser option button.



15 Click OK to save the NGenDist caller account settings.

Result: The Callers tab in the pcAnywhere Host Properties window reappears.

16 Perform steps 7 to 15 again to add the NGenDesign caller account.

Step 13. Verify the success of the installation

Introduction

Verify that your installation is successful by logging in on the server and client PCs.

On the server PC

1 Make sure that you are logged on to the server as **NGenSys**.

2 From the Start menu, choose Programs → Symposium Call Center Server → System Monitor.

Result: The System Monitor window appears showing the state of each Symposium Call Center Server service.

3 Check that all services are in the UP state.

Note: It can take 15 minutes or more for the system to come up and for all of the services to start. If all services do not start, refer to "Troubleshooting problems with Symposium Call Center Server services" on page 1170.

4 Check the Windows Event Viewer again to be sure that no errors occurred during the restart.

On the client PC

After a successful installation, log on from a client PC and verify that the historical statistics configuration matches the installed disk space and customer requirements.

Step 14. Add server to domain (optional)

Introduction

This step shows you how to add your Symposium Call Center Server to an existing domain, and perform other necessary tasks to make your server work in a domain. To perform this step, you need domain administrator's privileges, or ask the domain administrator to assign you a domain user account for remote access.

Standalone server

On a standalone server, you can add your server as a member of an existing domain now. Follow the procedures in this step.

Coresident server

On a coresident server, note that TAPI 3.0 requires the server to be part of a domain. See the following table on when you should add your coresident server to an existing domain.

If your coresident server includes	then add the server to a domain
Symposium Call Center Server and Symposium Web Client	*after* installing Symposium Web Client
Symposium Call Center Server, Symposium Web Client, and TAPI 3.0	*after* installing TAPI 3.0

Add Symposium Call Center Server to your domain

Once you have completed installing Symposium Call Center Server, you can add your server as a member of an existing domain (standalone only).

To add Symposium Call Center Server to your domain

1. To add the server as a member of an existing domain, right-click My Computer, and then select **Properties**.
2. In the System Properties window, click the **Computer Name** tab.
3. To add the server to a domain, click **Change**.
4. In the Computer Name Changes window, you can change the computer's name and its domain or workgroup affiliation. To add the server to an existing domain, click the **Domain** option button, and then type the name of the domain (you must provide the Fully Qualified Domain Name of the domain, which includes the prefix and suffix).
5. Click **OK**. When the system has processed your change successfully, it notifies you that the server now belongs to the domain that you specified.
6. Restart the server when prompted to do so.

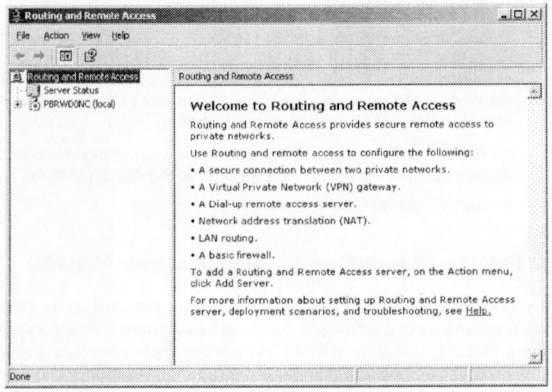
Configure the operating system for remote access (domain)

In a Windows Server 2003 Domain environment, you must create a dial-up user as a Domain user on the Domain controller and assign dial-in access permissions to this user. When dialing in to the Symposium Call Center Server Release 5.0 server's RAS configuration, the Domain controller authenticates the user. Because no local dial-in account is created on the Symposium Call Center Server, the system no longer uses accounts NGenDist and NGenDesign for dial-up access. However, once you establish dial-up using the domain user account the pcAnywhere user accounts can still use the NGenDist or NGenDesign accounts.

To configure the operating system for remote access (domain)

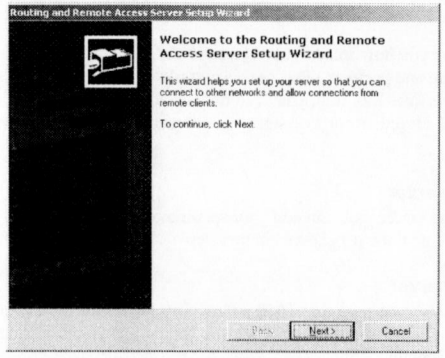
1 From the Start menu, choose Administrative Tools → Routing and Remote Access.

Result: The Routing and Remote Access window appears.



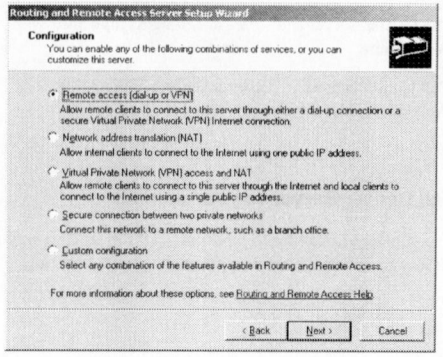
2 Right click the Local Server Name, and then select Configure and Enable Routing and Remote Access.

Result: The Welcome window appears.



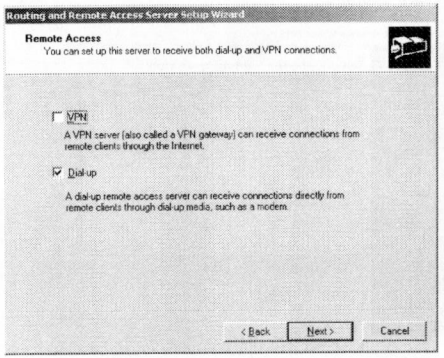
3 Click Next.

Result: The Configuration window appears.



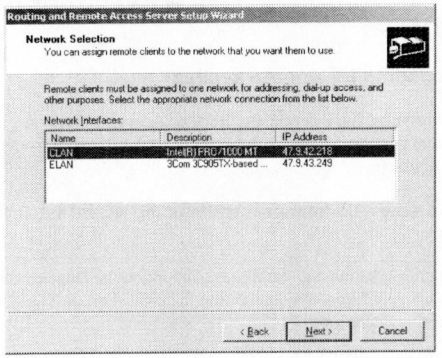
4 Make sure Remote Access (dial-up or VPN) is selected, and then click Next.

Result: The Remote Access window appears.



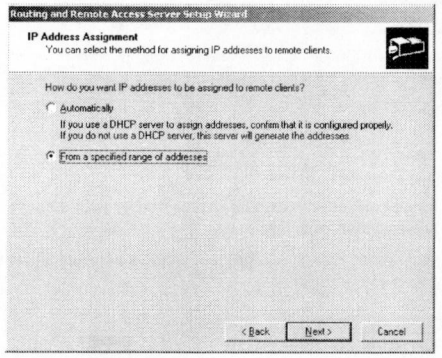
5 Click Dial-up and then click Next.

Result: The Network Selection window appears.



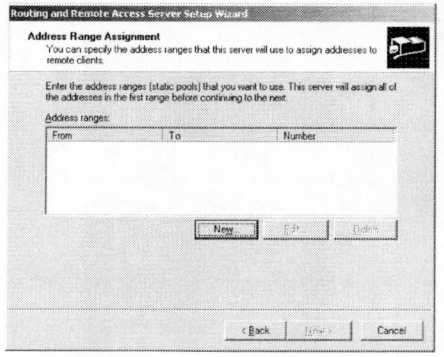
6 Select the network connection that represents your CLAN, and then click Next.

Result: The IP Address Assignment window appears.



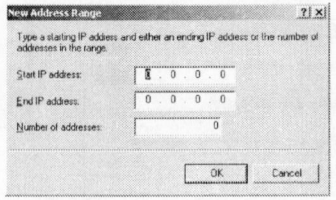
7 Select From a specified range of addresses, and then click Next.

Result: The Address Range Assignment window appears.



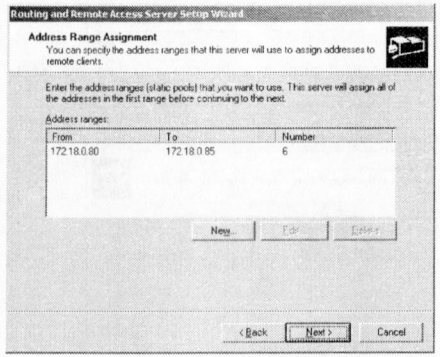
8 Click New.

Result: The New Address Range window appears.



9 Enter the range of IP addresses that is provided by your domain administrator, and then click OK.

Result: The Address Range Assignment window appears showing the address ranges you entered.

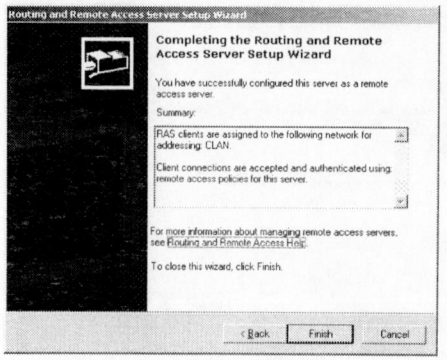


10 Click Next.

Result: The Managing Multiple Remote Access Servers window appears.

11 Select No, use Routing and Remote Access to authenticate requests, and then click Next.

Result: The Completing the Routing and Remote Access Server Setup Wizard window appears.



12 Click Finish.

Result: The Routing and Remote Access service starts and is successfully installed on your computer.

Set up your user accounts for remote access

Once you have installed the Routing and Remote Access service on your server, you need to set up your user accounts for remote access. Choose from one of the following two options.

Option 1: To create a domain user while using NGenDist account for pcAnywhere

This option requires creating a domain user account on the Domain controller with dial-in access privileges, while retaining the NGenDist or NGenDesign accounts at a pcAnywhere level.

1 On the Domain controller, create a new Domain user account and allow dial-in access.

Note: It is recommended to use a user name and password that are different from NGenDist and NGenDesign. The network administrator may be required to carry out this step. Record the user name and password carefully as they will be required to support the Symposium Call Center Server Release 5.0 server remotely.

2 On the Symposium Call Center Server Release 5.0 server, no changes are required to the operating system, RAS configuration, server software or pcAnywhere installation.

3 When dialing in to the Release 5.0 server of Symposium Call Center Server, the system prompts the remote user for a domain user account and password. Once the Domain controller authenticates the domain user account and password, you can start the pcAnywhere session.The pcAnywhere login can still use the NGenDist or NGenDesign account.

Note: Since there is no local record of the Domain user account, you need to maintain two user accounts, one being the domain user account, and the other being the local pcAnywhere account.

Option 2: To use the Domain user account for pcAnywhere

This option requires that you create a domain user account on the Domain controller with dial-in access, as in option 1. However, you also use the same domain user account instead NgenDist for pcAnywhere access. The NGenDist or NGenDesign accounts are no longer used at any level.

1 On the Domain controller, create a new domain user account and allow dial-in access.

Note: Nortel recommends that you use a user name and password that are different from NGenDist and NGenDesign. The network administrator may be required to carry out this step. Record the user name and password carefully as they will be required for remote support of the Symposium Call Center Server.

2 On the Symposium Call Center Server, no changes are required to the operating system, RAS configuration, server software, except for the pcAnywhere configuration.

3 On the pcAnywhere configuration, you need to select a domain user account from the Domain controller in the pcAnywhere Add Users window.

Note: The Symposium Call Center Server user must be logged in using an account with Domain Administrator privileges before configuring pcAnywhere users.

Stop and disable the Win 32 Time Service (M1 switch)

pg. 70

If you are using an M1 switch, make sure to stop and disable the Windows Time Service. You do not need to disable the Windows Time Service if you are using a DMS switch or installing a NCC server.

To stop and disable the Win32 Time Service

1 Check that the M1/Succession time is within 10 seconds of the Domain Controller time. If not, adjust the M1/Succession time to match the Domain Controller time.

2 On the Windows desktop, right-click My Computer and choose Manage → Services and Applications → Services.

3 On the right window, right-click Windows Time Service and select Stop.

4 When the Windows Time Service stops, right-click Windows Time service again, and select Properties.

5 On the General tab, change the Startup Type to Disabled.

6 Click Apply, and then click OK.

7 On the Computer Management window, check that Windows Time Service Startup Type is disabled.

8 Close the window.

9 Once you have installed Symposium Call Center Server, check that the M1/Succession time is within 10 seconds of the Domain Controller time. If not, adjust the M1/Succession time to match the Domain Controller time.

Note: Nortel recommends that the time difference between the M1 and the Domain controller time be kept within a few seconds (+/- 10 seconds). The maximum difference can be up to 5 minutes before Kerberos authentication problems may arise. You should check the times on the M1/Succession and the domain to ensure that the 5-minute tolerance is not exceeded.

Step 15. Other post-installation tasks

Configure RSM

Note: You must configure RSM for a coresident server.

You must configure the RSM service to provide moving window and interval-to-date statistics for multicast real-time displays. For instructions on configuring RSM, see Chapter 22, "Installing and configuring Real-time Statistics Multicast."

Check and install the latest Service Update Supplements

Check for the latest Service Update Supplements on the Enterprise Solutions PEP Library web site at http://www.nortelnetworks.com/espl. To see how to install a Service Update Supplement, see "Installing patches on the server" on page 952.

Update the emergency repair disk

After you make changes to the server, update the emergency repair disk to record the latest configuration data.

Configure SNMP (optional)

If you are using the Windows SNMP service to forward traps to an NMS, you must perform these tasks, if you have not already done so:

- Configure the Windows SNMP service on the server.
- Select the types of events to be forwarded to the NMS.
- Configure the NMS.

For more information, see "Configuring SNMP on the server" on page 985.

Change your Event Viewer settings

Based on the size of your call center, you may want to change the size of your Windows Application Log that hold events produced by the Symposium Call Center Server application. For information, see "Changing the Windows EventLog size" on page 982.

Back up the server

Create full, database, and (if applicable) RAID backups of the server. For instructions, refer to Chapter 19, "Backing up data."

What's next?

Continue to Chapter 5, "Installing the client software" on page 193.

Chapter 15

Installing/uninstalling patches

In this chapter

Overview

Introduction

Nortel supplies the following patches for Symposium Call Center Server Release 5.0:

Patch type	Description
Service Update (SU)	This patch provides planned product updates and bug fixes. Each SU contains the content of the previous SU and the latest fixes. When you install the latest SU, it automatically uninstalls the previous SU installed on your system. Example of an SU name: NN_SCCS_5.0_SU_02_S.
Service Update Supplement (SUS)	This patch provides urgent individual fixes required before the next Service Update (SU) is available. When you install an SU containing an SUS already installed on your system, the installation program automatically uninstalls the SUS from your system. Example of an SUS name: NN_SCCS_5.0_SUS_02_S.

Service Updates

Periodically, Service Update Supplements (SUSs) are consolidated into Service Update. Service Updates are installed in the same way as Service Update Supplements, although they can take longer to download because they are larger. There are normally two Service Update packs: one for the client and one for the server.

When you install the software (or upgrade to a new version), you should install the latest Service Update on the client. If no Service Update pack is available, check with your Nortel customer support representative.

Obtaining patches

You can obtain Service Updates and Service Update Supplements as follows:

- All SU packs and SUSs are available on the Enterprise Solutions PEP Library web sites, located at http://www.nortelnetworks.com/espl.

  Note: To register for this web site, follow the instructions provided at http://nortelnetworks.com/register.

- Any SU packs and SUSs that are available at the time of shipping are included on the Symposium Call Center Server Supplementary CD shipped with your software.

Before you begin

If you are not installing patches from a CD, download them from the web site or obtain them from your Nortel customer support representative.

Section A: Installing/uninstalling patches on your server

In this section

Installing patches on the server

Introduction

This section shows you how to install patches (Service Updates and Service Update Supplements) on your Symposium Call Center Server.

Prerequisites

- Install only when the Service Update is a later release than the one you installed.
- You must be logged on to the server as NGenSys.

ATTENTION

When installing patches on a Standby Server configuration, apply the patch on the Active Server before the Standby Server. Failure to do so will result in critical errors in the Standby Server configuration.

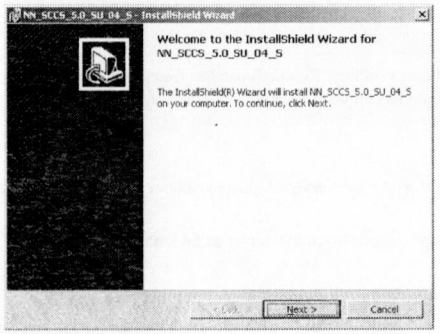
- You must install patches on the NCC server before or at the same time as you install them on the first nodal server to ensure that networking issues are resolved when the nodal servers are operational.

To install a patch on the server (SU or SUS)

1. Use the PEP Viewer utility to ensure that the patch (SU or SUS) has not already been installed. For more information, refer to "PEP Viewer" on page 1122.
2. Ensure that you have closed all applications.
3. If you are installing patches from a CD-ROM, insert the Supplementary CD into the CD-ROM drive.
4. Locate the patch directory on the CD, or the directory into which you downloaded the patch from the Web.

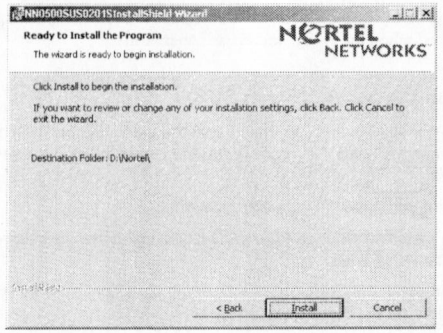
5 Double-click the <*SU ID*>.msi or <SUS ID> file associated with the patch.

Result: The following window appears:



6 Click Next to proceed.

Result: The following window appears:



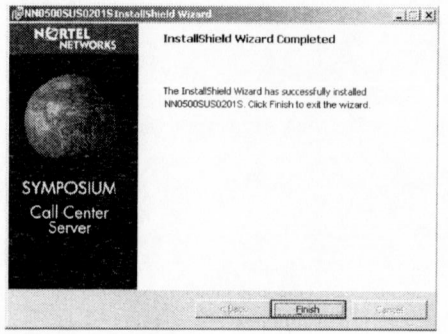
Note: If you are installing an SU instead of an SUS, the label name on the window appears as NN_SCCS_5.0_SU_04_S instead of NN_SCCS_5.0_SUS_04_S.

7 Click Next, and then click Install.

Result: The system installs the patch on the server. If you are installing an SU, the patch installer wizard notifies you of the following if it detects an SU or SUS on the system:

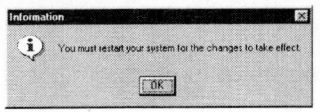
- If an old SU or old SUSs are installed on the system, a window appears indicating that the obsolete SU and SUSs will be automatically uninstalled before the new SU is installed. Click Next to continue.
- If any coresident SUSs are installed, a window appears to notify you that they will remain on the system after the new SU is installed. Click Next to continue.
- If the installer detects any unrecognized SUSs, it warns you that the installation of the new SU cannot proceed. Click Cancel, and remove the SUSs using the PEP Viewer utility. (For more information, refer to "PEP Viewer" on page 1122.) After removing the SUSs, return to step 1 of this procedure to install the new SU.

When installation is complete, the following window appears:



8 Click Finish.

Result: If the patch requires a server restart, the following or a similar window appears:



If this window appears, continue with the following step. If it does not appear, skip to step 10.

9 Click OK.

10 You can use the PEP Viewer utility to confirm that the patch has been installed on the server. For more information, refer to "PEP Viewer" on page 1122.

Uninstalling patches from the server

Introduction

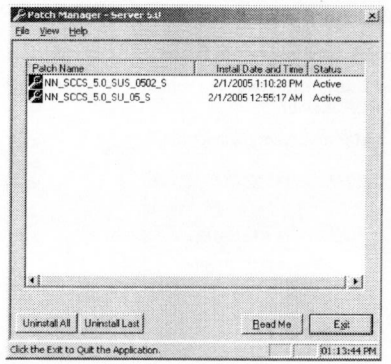
If you want to remove patches from the server, you can use the PEP Viewer utility to remove them.

To remove all the PEPs and SUs installed on a server

1 Make sure all running applications are closed.

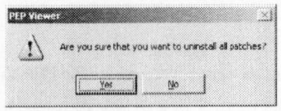
2 From the Windows Start menu, choose Programs → Symposium Call Center Server → PEP Viewer.

Result: The Patch Manager window appears.



3 Click Uninstall All.

Result: The following window appears:



4 Click Yes.

Result: The SUs and SUSs are uninstalled.

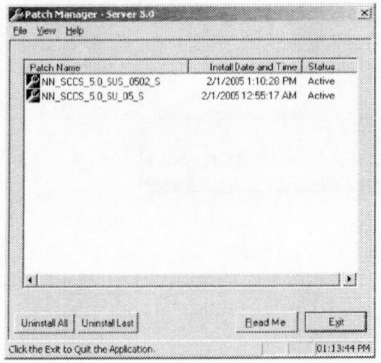
Note: You do not need to restart the system if you plan to install a new SU, SUS, or PEP, or if you are performing other actions on the server (for example, uninstalling the server software). Restart the system only after you have completed these actions.

To remove an SUS installed on the server

1 Make sure all running applications are closed.

2 From the Windows Start menu, choose Programs → Symposium Call Center Server → PEP Viewer.

Result: The Patch Manager window appears.



3 Select the Service Update Supplement that you want deleted.

4 Click Uninstall Last.

Note: If you have more than one SUS installed, you must uninstall the most recent SUS first. When you click Uninstall Last, the system automatically selects the most recent SUS to uninstall. To uninstall all SUSs, click Uninstall All.

Result: The system uninstalls the most recent SUS.

5 Click OK.

Note: You must restart the system to ensure that all the changes take effect.

Section B: Installing/uninstalling patches on the client

In this section

Installing patches on the client

Introduction

This section shows you how to install patches (Service Update or PEP) on the Symposium Call Center Release 4.0 client.

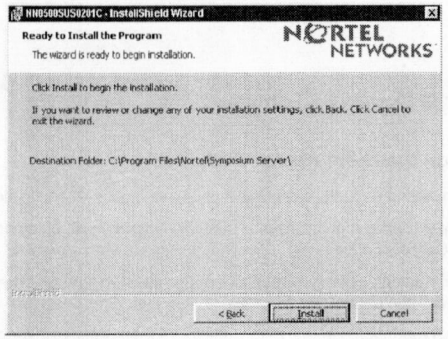
To install a patch on the client (SU or PEP)

1. Before installing a patch, ensure that you have closed all applications.
2. If you are installing a patch from a CD-ROM, insert the Supplementary CD into the CD-ROM drive.
3. Locate the patch directory on the CD, or the directory into which you downloaded the patch from the Web.
4. Check the readme file in the patch directory for any special instructions or dependencies before installing the patch.
5. Double-click the <*SU ID*>.msi or <*PEP ID*> file associated with the patch.

   Result: The following window appears:

6 Click Next to proceed.

Result: The following window appears:



7 Click Install.

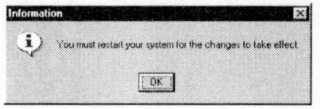
Note:

If you are installing an SU:

- If obsolete client PEPs are installed on the system, the Obsolete PEPs Found window appears. To uninstall the known PEPs, click Next. (To exit the installation, click Cancel.)
- If an older version of a client SU is installed on the system, the Older Version of SU Found window appears. Installation of the current SU automatically uninstalls older SUs. To uninstall the older SU, click Next. (To exit the installation, click Cancel.)

- If obsolete PEPs and an older version of an SU are installed on the client, the Obsolete SU and PEPs Found window appears. To uninstall the old PEPs and SU, click Next. (To exit the installation, click Cancel.)

Result: The patch is installed on the client PC, you are prompted to view the Readme file, and then the installation completes. If a restart is required, the following or a similar window appears:



8 After the restart or when prompted, click Finish to complete the installation.

Uninstalling a patch from the client

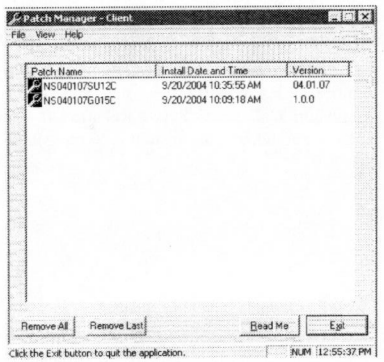
Introduction

This section shows you how to uninstall a patch (Service Update or Service Update Supplement) from the client.

To uninstall a patch from the client (SU or PEP)

1 From the Windows Start menu, choose Programs → Symposium Call Center Client → PEP Viewer.

Result: The Patch Manager window appears.



2 Perform one of the following steps:

- Click Uninstall Last to remove the most recently installed PEP.
- Click Uninstall All to remove all installed PEPS.

3 The confirmation message "Are you sure you want to uninstall the <Name of patch> patch?" appears.

4 Click Yes to remove the patch.

Note: If you are removing a series of PEPS, repeat these steps for each PEP you want to uninstall.

Chapter 16

Configuring and uninstalling pcAnywhere

In this chapter

Overview

With pcAnywhere, you can perform advanced administrative tasks on the server from a remote PC and control the server as though you were directly connected to it.

Notes:

- For coresident servers, you cannot activate remote access support. See "Remote access support and coresidency," on page 37 for other support options.
- Remote access allows your distributor or Nortel customer support to log on to your server remotely to provide support.
- To use pcAnywhere for remote access, your server must have a serial port configured as COM1, as well as a modem, or alternatively, a USB port and a USB modem.
- In order to enable remote access support if necessary, install pcAnywhere before installing Symposium Call Center Server Release 5.0. However, if desired, you can install pcAnywhere after installing Symposium Call Center Server Release 5.0.

Establishing a pcAnywhere connection using dial-up

Introduction

This section offers an overview of how to configure a connection profile on the client PC that is used to connect with the server. Since client PCs are not limited to running one particular operating system, the steps below include general guidelines for accessing the Windows utilities that are required for configuring the connection. For specific instructions on accessing these utilities, consult the Windows online Help on the client PC.

To create a server connection profile on the client PC

1 On the client PC, open the Network and Dial-up Connections utility (or the Dial-up Networking utility).

Note: The name of this utility differs according to the operating system installed on the client PC. For specific instructions on accessing either of these utilities, consult the Windows online Help on the client PC.

2 In the Network and Dial-up Connections window (or the Dial-up Networking window), click Make New Connection to open the new connection wizard.

3 Select your modem.

4 Enter a name for the connection.

5 Enter the server telephone number.

6 When you have finished following all the wizard prompts, click Finish.

7 Continue with the following procedure.

To configure a connection profile

1 Right-click the icon for the server connection that you created in "To create a server connection profile on the client PC" above, and then select Properties.

2 Verify the information on the General property page, and correct it if necessary.

3 Click Configure.

4 In the property pages, configure the settings for your connection. Ensure that you configure the following properties as indicated:

- For the dial-up server type, select PPP.
- For the network protocols, select only TCP/IP and NETBEUI.
- Select the option to specify the IP address of the server, and type the server's IP address.
- Ensure that the option to use a default gateway on a remote network is *not* selected.

5 The remaining boxes are optional. Fill them in as required for your network.

6 Click OK to save your changes.

ATTENTION

If the RAS dial-up connection drops before the pcAnywhere remote session is terminated correctly, do not attempt to re-connect the dial-up session for 15 minutes. This is to allow the pcAnywhere Host to recognize that the session has terminated prematurely and then reset itself to allow a reconnection to proceed normally. Reconnecting the dial-up immediately, without waiting for 15 minutes, can result in the need to cancel and restart the pcAnywhere Host session on the Symposium Call Center Server.

Uninstalling pcAnywhere 11.0.1

Introduction

Follow this procedure if you experience problems with pcAnywhere that require reinstallation of the software. For more information, see "Troubleshooting installation problems" on page 1160.

To uninstall pcAnywhere 11.0.1

Note: Before uninstalling pcAnywhere, ensure there is no pcAnywhere Waiting icon in the taskbar on your desktop. If the icon is on your desktop, right-click it and select Cancel Host.

1. From the Windows Start menu, choose Settings → Control Panel.
2. Double-click Add/Remove Programs.
3. Select Symantec pcAnywhere, and then click Remove.
4. When prompted to confirm, click Yes.

   Result: The Symantec pcAnywhere window appears. pcAnywhere is uninstalled.
5. The system prompts you to restart the server PC.
6. Click Yes.

   Result: The server restarts.

   Note: If the server hangs, restart it manually.

Chapter 17

Managing security

In this chapter

Password guidelines

Introduction

This section provides guidelines for selecting passwords for Symposium Call Center Server.

Password format

Write down any new passwords and store them in a secure place for future reference. Passwords are case-sensitive.

New passwords should be

- unique
- alphanumeric (they should contain at least one number)
- a minimum of six characters
- not nouns

Example

xyd45fst

When to change passwords

Change passwords at the following times:

- during the initial system setup after the operating system is installed
- at regular intervals for maximum security
- if you experience trouble logging on to Windows
- if server software is reinstalled (the default accounts and passwords are recreated, so passwords must be changed)

Note: If you require support from Nortel or your distributor, you must tell them the new passwords.

Changing Nortel user account passwords

Introduction

To maintain system security, change passwords regularly and store them in a secure location.

To make changes to the Administrator or any other Windows passwords, refer to the documentation provided with your operating system.

Default accounts and passwords

The following Windows accounts are created on the server during the installation procedure:

- NGenSys
- NGenDist
- NGenDesign

ATTENTION

The on-site installer is instructed to change all default passwords as part of the on-site installation procedures.

You can change all passwords with the procedures in this section. Nortel recommends that you change all passwords regularly to maintain system security.

If server software is reinstalled, the default accounts and passwords are recreated and passwords must be changed.

To change the NGenDist, NGenDesign, or NGenSys passwords

pg. 71

Note: You are not required to change the NGenSys password. If you change the NGenSys password, you must apply the same password change to the Meridian Application Server (MAS) Backup/Restore service.

1. Log on to the server as **Administrator**.
2. Click Start → Programs → Administrative Tools → Computer Management.

   Result: The Computer Management window appears.
3. Click Local users, and then click Users.

   Result: The Computer Management window displays a list of available user accounts, including NGenDist and NGenDesign.
4. Right-click NGenDist.
5. Click Set Password.

   Result: The Properties window appears.
6. In the Password box, type the new password.

   Note: Ensure that you use a password that contains a combination of numbers and letters (see "Password format" on page 972).
7. In the Confirm Password box, type the same password entered in the Password box.
8. Click OK.
9. Repeat steps 4 to 8 for NGenDesign.
10. Select Exit to save changes.
11. Record these passwords and store them in a secure place away from the server.

    If you have changed the NGenSys password, continue with the following procedure.

ATTENTION

When you are finished changing passwords, remember to log on as NGenSys. You must be logged on as NGenSys to monitor and manage the server.

To change the NGenSys password for MAS Backup/Restore service

Note: This procedure is required only if you change the Windows user account password for NGenSys.

1 Click Start → Settings → Control Panel → Administrative Tools.

2 Click Services.

Result: The Services window appears.

3 Scroll to MAS Backup/Restore service, and then select it.

4 From the Action menu, choose Properties.

Result: The Service window appears.

5 Click the Log On tab, and then fill in the Password and Confirm Password boxes with the current NGenSys password.

Note: Use the same password you assigned to NGenSys in "To change the NGenDist, NGenDesign, or NGenSys passwords" on page 974.

6 Click OK.

ATTENTION

When you are finished, remember to log on as NGenSys. You must be logged on as NGenSys to monitor and manage the server.

Protecting pcAnywhere settings

Introduction

This section describes how to create a password to protect the pcAnywhere settings on the server.

ATTENTION

If you select the option Required to modify properties, you must enter the password each time a setting is changed. You should record the password and keep a copy of it in a safe place. If you forget the password, you cannot change any settings.

To add a password to protect pcAnywhere settings

1 Log on to the server as **Administrator**.

2 From the Windows Start menu, choose Programs → Symantec pcAnywhere.

Result: pcAnywhere starts.

3 If necessary, select Be a Host PC.

4 Click Network.

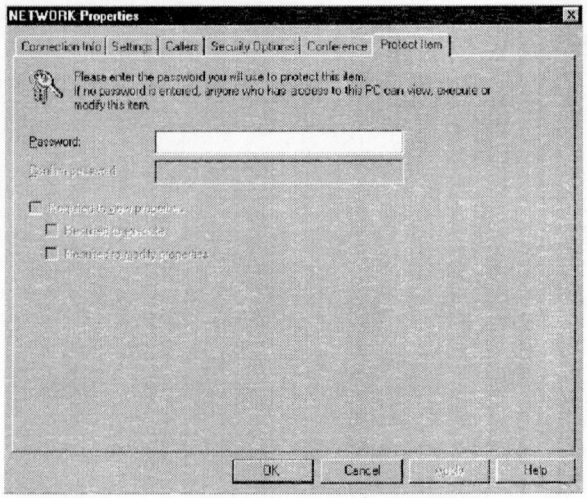
Note: Do not double-click the icon or you will begin a pcAnywhere session.

5 From the File menu, choose Properties.

Result: The pcAnywhere HOST Properties window appears.

6 Click the Protect Item tab.

Result: The following property page appears:



7 In the Password box, type a password that will protect the pcAnywhere network settings.

8 In the Confirm password box, type the password again.

9 Check the appropriate check boxes for the level of security you desire.

10 Click Apply to save the changes.

11 Click OK.

ATTENTION

When you are finished, remember to log on as NGenSys. You must be logged on as NGenSys to monitor and manage the server.

Checking server events for suspicious activity

Security auditing is enabled on the server. Suspicious actions by a user are logged as event code 40593 in the Event Browser in the SMI window on the client, and in the security log in the Windows Event Viewer. The severity of the event depends on the severity of the condition that caused the event. If the severity is Information, the event does not appear in the Alarm Monitor.

Chapter 18

Working with alarms and events

In this chapter

Overview of viewing events

Introduction

You can use two tools to view events that occur on your Symposium Call Center Server:

- the Event Browser on the client (supplied with Symposium Call Center Server)
- the Event Viewer on the server (supplied with the Windows operating system)

This chapter provides guidelines for viewing events with the Windows Event Viewer on the server, and describes recommended sizes for the event logs. It also explains how to configure the Windows Simple Network Management Protocol (SNMP) on the server.

For details about viewing events through the Event Browser on the client, see the *Administrator's Guide*.

Events

Events are log entries that record activities on Symposium Call Center Server, such as

- sending or receiving messages
- opening or closing applications
- errors

Some events are for information purposes only, while others can indicate problems. Events are categorized by severity.

Event severity

Events are assigned a default severity of Information, Minor, Major, or Critical. The Alarm Monitor does not report Information-level events.

Information

These events indicate that something noteworthy has happened on the system, but do not mean that there is a problem. For example, an information-level event can indicate that a service has started or stopped. These events appear in the Event Browser but not in the Alarm Monitor.

Minor

These events indicate that a non-service-affecting fault condition exists and that you must take corrective action to prevent a more serious fault. For example, a minor event is generated when the file system is 90 percent full.

Major

These events indicate that a service-affecting condition has developed and an urgent corrective action is required. The event condition can cause severe degradation in server performance, and you must restore full capacity. For example, a major event is generated when the file system is 100 percent full.

Critical

These events indicate that a service-affecting condition has occurred and an immediate corrective action is required. Critical events are reported when a component is completely out of service and you must take immediate action to restore it. For example, a critical event is generated when the file system crashes.

Simple Network Management Protocol

Symposium Call Center Server also supports Simple Network Management Protocol (SNMP) traps. You can use SNMP to send events to a Network Management System (NMS) on your network.

Changing the Windows EventLog size

Introduction

The Windows EventLog resides on the server and stores a record of all events that occur on the server. When you install Symposium Call Center Server, the installation program sets certain default sizes for the various Windows log files. If you change the size settings, the results affect the entire server.

CAUTION

Risk of data loss

Only qualified technicians should make changes to these settings.

Event wraparound

The EventLog size is fixed. It does not increase in size as new events are added to the log. When the log is full and a new event is generated, the server removes the *oldest* event report in the log and replaces that report with the newest one.

Changing the size of the log files

If you reduce the size of the event logs, the server can store fewer events. If you increase the size of the event logs, you reduce the amount of available disk space on the server, which may slow response times for retrieving events from the Event Browser.

Default event log size

During a Symposium Call Center Server installation, the log settings are set to the following values:

Log name	Size	Event log wrapping
Application Log	8192 kbytes	Overwrite events as needed.

Log name	Size	Event log wrapping
System Log	512 kbytes	Overwrite events as needed.
Security Log	512 kbytes	Overwrite events as needed.

Making changes to the default Application Log size

Application events, such as Symposium Call Center Server events, are stored in the Application Log. You can adjust the size of the Application Log to suit the size of your call center. When you change the Application Log size, you also change the number of Symposium Call Center Server events that are stored.

Nortel recommends the following size settings for the Application Log:

- For a small call center, set the log size to 512 kbytes.
- For a medium-sized call center, set the log size to 6015 kbytes or greater, depending on the number of days you want to keep the events.
- For a large call center, set the value at 10 048 kbytes or greater, depending on the number of days you want to keep events.

Note: Do not change the event log wrapping settings.

For information on how to adjust the size of Windows event logs, refer to the documentation supplied with the Windows operating system.

Using the Windows Event Viewer

Introduction

Most of the information provided by the Windows Event Viewer on the server is also accessible through the Event Browser on the client. The following type of information is not available on the client:

- database events (from the Application Log)
- MAS debug events (from the Application Log)

When to use

Use the Windows Event Viewer on the server to view information that you cannot view through the Event Browser on the client. For more information on the Event Viewer, refer to the documentation supplied with the Windows operating system.

Configuring SNMP on the server

Introduction

Windows provides a Simple Network Management Protocol (SNMP) agent, which runs as a service on Symposium Call Center Server. You can use this service to forward events to a Network Management System (NMS) on your network. To do so, you must do the following tasks:

- Configure the Windows SNMP service on the server (see "To configure the Windows SNMP service to forward traps to an NMS" on page 985).
- Select the types of events to be forwarded to the NMS (see "To select the types of events to be forwarded" on page 987).
- Configure the NMS (see "Configuring the NMS" on page 988).

Overriding event filtering for individual events

When you configure the server, you choose the types of events to be forwarded to the NMS. For example, you may choose only to forward Unknown and Critical events. However, you may also be interested in tracking a Minor event, such as 41553. If you configure the server to forward all Minor events, a significant amount of traffic is generated on your CLAN. To avoid this, but still track event 41553, you can use the Event Preferences feature. This feature allows you to temporarily assign event 41553 a priority of Critical. After you do so, the event is automatically forwarded to the NMS.

For detailed instructions, see the *Administrator's Guide*.

To configure the Windows SNMP service to forward traps to an NMS

1 Log on to the server as **NGenSys**.

2 From the Windows Start menu, choose Programs → Administrative Tools → Services.

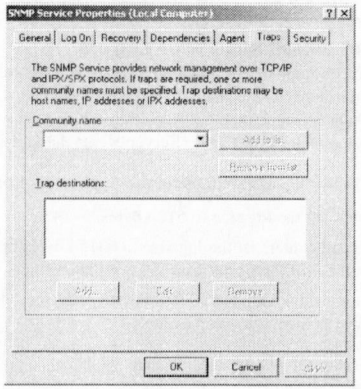
Result: The Services window appears.

3 From the list of Services, select the SNMP Service.

4 Click Action → Properties.

Result: The SNMP Service Properties window appears.

5 Click the Traps tab.

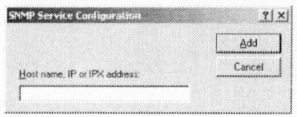


6 If no community name is defined, in the Community name box, type **public.**

7 Click Add to list.

8 To add the IP address of the NMS to which the server will send traps, click Add.

Result: The SNMP Service Configuration window appears.



9 Type the IP address of the NMS.

10 Click Add.

Result: The SNMP Service Configuration window closes.

11 In the SNMP Service Properties window, click OK.

Result: The SNMP Service Properties window closes.

12 In the Services window, right-click the SNMP Trap Service.

13 From the resulting pop-up menu, click Start.

Result: The SNMP Trap Service starts.

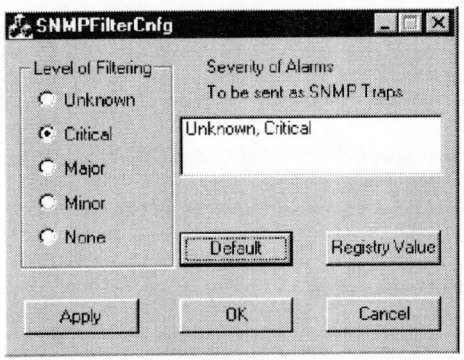
14 Close the Services window.

To select the types of events to be forwarded

1 From the Windows Start menu, choose Programs → Accessories → Windows Explorer.

2 Browse to the folder D:\Nortel\bin, and double-click SNMPFilterCnfg.exe.

Result: The SNMPFilterCnfg window appears.



3 In the Level of Filtering box, select the types of events you want to forward to the NMS. All event types that appear above the type that you select are also forwarded. For example, if you select Major, all Unknown, Critical, and Major events are forwarded.

4 Click OK.

Configuring the NMS

After you configure the server, you must configure the NMS to receive and interpret traps (including identification to the NMS, and the origin and format of the Symposium Call Center Server traps). To do so, you must load or compile the Symposium Call Center Server Management Information Block (MIB) files in the NMS.

The following MIB files describe the format of the traps generated by the server:

- nt-ref.mib (MIB-II)
- nbflt.mib (NGen MIB)

The files are available in the following locations:

- on the Server Application CD for Symposium Call Center Server, in ..platform\default\nortel\data\.
- on the server in Symposium Call Center Server, in the path *D*:\nortel\data

For more information about configuring your NMS, refer to your NMS documentation.

Format of the NGen MIB

Symposium Call Center Server supports the Windows standard MIB-II. In addition, it provides its own MIB, the NGen MIB.

Chapter 19

Backing up data

In this chapter

Overview of backing up data

Introduction

Your backup strategy is a critical part of your disaster recovery program. Backups minimize the data loss resulting from catastrophic failure.

Your backup strategy can include the following types of backups:

- database backup
- full backup
- RAID

Coresident server

This chapter shows you how to schedule a backup of Symposium Call Center Server Release 5.0. To back up a coresident server, see Section C: "Using a third-party backup utility to create full backups," on page 1041. To back up the Symposium Call Center Symposium Web Client or TAPI, see the following guides:

- *Nortel Symposium Call Center Web Client Planning, Installation, and Administration Guide*
- *Network Manager's Guide for Symposium TAPI Service Provider for Succession, Release 3.0* (for TAPI)

When to use a database backup

Nortel recommends performing a daily database backup using the Symposium Call Center Server backup utility. A database backup is performed while the server is online. In conjunction with a Platform Recovery Disk (see "Creating a Platform Recovery Disk" on page 1005), a database backup allows you to restore all system data (scripts and statistics) after a crash.

Note: If your server is equipped with a mirrored Redundant Array of Independent Disks (RAID) system, then recovery from a single drive failure does not require a database backup. However, you should still continue to perform daily backups.

Backup destinations

You can direct your database backup to the following destinations:

- a remote directory on a network computer
- a tape in a local tape drive

  Use multiple backup tapes on a rotation basis, with tapes being rotated off-site for protection in the event of a catastrophic disaster.

ATTENTION

You do not require a full backup of your Symposium Call Center Server if you maintain a current database backup and Platform Recovery Disk, as well as the original server software. If you want to do a full backup of your server, you must use a third-party backup utility. For more information on full backups, see Section C: "Using a third-party backup utility to create full backups," on page 1041.

Note: To back up data on the client, you must provide separate software and hardware.

Daily maintenance and database backups

The daily maintenance process consolidates statistics. It runs on the server at midnight and takes several hours, depending on the system configuration. Frequent delays occur if you schedule a backup at the same time as the daily maintenance process. The server puts the backup on hold until the maintenance process is completed. The delay is logged in the backup log file, and it has no impact on the system or backup.

When to use a full backup

A full backup allows you to restore the server to its state at the time of the backup. It is useful for recovery from a catastrophic failure in the server's disk subsystem. In combination with a current database backup, a full backup can help you minimize your data loss.

A full backup is performed while the server is offline. You should create a full backup

- after installation and configuration of a new server
- before and after a major upgrade of the server (for example, from Release 4.2 to Release 5.0)

- before and after any major hardware upgrades (such as a disk expansion, BIOS upgrade, or platform migration)

ATTENTION

To create a full backup, you must use a third-party backup utility. For information on preparing for a third-party backup, see Section C: "Using a third-party backup utility to create full backups," on page 1041.

When to use a RAID backup

RAID backups are recommended for platforms with hot-swap disk configurations. They provide a fast mechanism for backing up and restoring your system. Used in conjunction with a database backup, a RAID backup allows you to restore your system to its condition preceding a crash.

The Symposium Call Center Server backup utility backs up the server database. You need a database backup to recover from database corruption, or to perform an upgrade or migration on your server. (The backup utility is not intended to restore individual pieces of information or files that were deleted by accident.)

Backup best practices

To help you recover your database in the case of a system failure, follow the guidelines listed below to ensure that you always have an up-to-date backup of your database files:

- Create a new Platform Recovery Disk after you have expanded your database using the Database Expansion Utility, restored your database, and each time you change any of the following information on the server:
  - **Customer Information** If you change your customer name or company name, then you must create a new Platform Recovery Disk.
  - **Keycode Information** If you enter a new serial number (or dongle number for DMS/SL-100 systems) and keycode when upgrading the server software, then you must create a new Platform Recovery Disk.
  - **DMS/SL-100/M1/Nortel Communication Server 1000 Switch Information** If you update switch information, such as the switch name, IP address, and customer number, then you must create a new Platform Recovery Disk.

  - **ELAN/CLAN IP Addresses** If you update the ELAN or CLAN IP address of the server, then you must create a new Platform Recovery Disk.
  - **Voice Connection** If you update the connection to the voice processing system (CallPilot or Meridian Mail), then you must create a new Platform Recovery Disk.
  - **RSM IP Address** If you update the Real-Time Statistics Multicast (RSM) IP address of the server, then you must create a new Platform Recovery Disk.
  - **Site Name** If you change the site name for Symposium Call Center Server, then you must create a new Platform Recovery Disk.
- Perform daily database backups. For more information on setting up database backups, see Section A: "Setting up backup options," on page 1011.

Backup speeds

Introduction

The following table provides a summary description of the backup types and speeds:

Backup type	Definition	Result	Approximate speed of backup
Database backup	Backs up all information stored in the Symposium Call Center Server database to a remote directory or to tape.	*Online* operation: Call processing continues as the backup executes. No Symposium Call Center Server services are stopped.	■ See notes below the table.
Full backup **Note:** Full backup requires a third-party backup utility.	Backs up the entire system using a third-party backup utility.	*Offline* operation: Allows you to restore the system to its state at the time of the backup.	■ See the documentation for the third-party backup utility.
RAID drive backup	Backs up drives to a spare drive pack.	*Offline* operation: Fast system backup and simple restore.	■ See the supplier's documentation.

Notes:

- To help calculate the speed of database backups before an upgrade (to tape or a remote directory), it is a good idea to perform a trial run of the backup at least several days before the upgrade. Keep in mind that the time required to do a database backup can vary between the trial run and the actual backup day due to several factors.
- For a listing of the variables that can affect the speed of your backup and restore, see "Variables affecting backup and restore speed" on page 996.

- To calculate the speed for database backups to tape (based on your configuration), see the formula listed in the section "Online Database Backup Speed Elapsed Time" in the *Nortel Networks Symposium Call Center Server Planning and Engineering Guide* for Release 5.0.
- To see sample time measurements for tape backup and restore, see "Benchmark statistics for tape backup and restore" on page 999.
- To help you calculate the disk space requirements before you back up your database, see details about the DBSpace utility in the section "Calculating the capacity requirements for database backups" on page 1008.

Variables affecting backup and restore speed

Since Symposium Call Center Server runs on a Platform Vendor Independence (PVI) platform, the factors that affect backup speeds can vary from server to server. The factors shown in the following table can affect backup and restore speed for both remote directory and tape backups. To improve the backup/restore speed on your server, note the recommendations in the last column of the table.

Backup/restore variable	Impact of variable on backup/restore	Recommendation
Symposium Call Center Server CPU speed	Faster CPU means more free processing time available for the backup/restore.	Use a higher CPU speed on your PVI server.
Symposium Call Center Server database disk speed	Faster database disk speed allows for a higher data transfer rate for the backup/restore task.	Use a faster disk.

Backup/restore variable	Impact of variable on backup/restore	Recommendation
Symposium Call Center Server processing time	Since database backup/restore is a low priority background task on the server, more call traffic, real-time displays, or scheduled reports will slow down the backup/restore task.	Backup/restore your database during low traffic hours, or during periods of low server activity.
Symposium Call Center Server local tape type	Different tape drives have different data transfer rates. Faster tape drives will allow faster database backup/restore on a local tape.	Use a faster tape drive type for local tape backup/restore.
Remote PC CPU speed	Faster CPU speed on the remote PC will mean more free processing time available for the remote backup/restore task on the remote PC.	Use a remote PC with a higher CPU speed.
Remote PC disk type	Different disk types have different data transfer rates (for example, SCSI is usually faster than IDE, or a newer ATA interface is faster than older IDE type, and so on). Remote database backup/restore speed is dependant on the total data transfer rate of the remote PC disk.	Use a faster disk type on the remote PC.

Backup/restore variable	Impact of variable on backup/restore	Recommendation
Remote PC disk speed	A faster disk speed allows for a higher data transfer rate for the remote backup/restore task on the remote PC.	Use a faster disk on the remote PC.
Remote PC processing time	The more processes run on the remote PC, the more the remote database backup/restore task on the remote PC will be slowed down.	Do not run other processes or applications on the remote PC during remote database backup/restore.
LAN bandwidth	The speed of the remote database backup/restore is proportional to the network bandwidth (speed). A higher LAN speed will have a higher bandwidth to handle the additional network traffic for the backup/restore.	Use a LAN with a higher bandwidth.
LAN traffic	The speed of the remote database backup/restore is highly dependant on the actual LAN traffic at the time of the backup/restore. Additional traffic in the network will delay the backup/restore packets between Symposium Call Center Server and the remote PC.	Backup/restore your database during low LAN traffic hours.

Backup/restore variable	Impact of variable on backup/restore	Recommendation
Symposium Call Center Server database data	The total length of backup time is proportional to the actual amount of physical data in the database at the time of the backup. The length of the backup time will be shorter if less data is in the database.	Keep the minimum call statistical data required (for example, do not keep 10 days of data if you only need to keep 2 days of data).

Benchmark statistics for tape backup and restore

The benchmark results below act as guidelines to indicate the amount of time it takes to perform database maintenance. This maintenance includes database backups to tape and Database Integrity Checks (DBCC). The times listed are specific to the platform and software versions shown; actual time may vary on other PVI platforms and with other software versions:

- Symposium Call Center Server Release 5.0
- Database partition size: 16 384 Mbytes
- Total number of Database Partitions: 4
- Blue database size: 23 348 Mbytes (23.34 Gbytes)
- CBC database size: 27 678 Mbytes (27.67 Gbytes)

Hardware

Platform	Dell Optiplex GX200, 512 Mbytes RAM
CPU speed	Pentium III, 728 MHz
Hard disk	80 Gbyte SCSI
Primary partition	C: (4096 Mbytes)
Extended partition	D: for Symposium Call Center Server Release 5.0 software (4096 Mbytes)

Hardware

Tape drive	Tandberg Tape Drive SLR32

Notes:

- The 32 Gbyte (compressed) Tandberg tape can back up only up to 19 Gbytes of Sybase database (data volume).
- The maximum total database combination partition disk size is 64 Gbytes.

Benchmark results

Process	15 Gbytes data volume	Default data volume
Database backup	95 minutes	28 minutes
Database restore	213 minutes	127 minutes
+ Database Integrity Check	163 minutes	29 minutes
+ System overhead*	15 minutes	15 minutes
Total database restore	391 minutes	171 minutes
Database Integrity Check	163 minutes	29 minutes

*The system overhead is the approximate time required to shut down/restart the Sybase server during the restore process and setting database thresholds.

Note: The default data volume is the state of the system with a brand new installation (for example, no historical or configuration data has been stored in the database yet).

Requirements for backups

Introduction

If you are using a remote directory to back up your database, read this section to understand requirements for the remote computer and network.

Remote computer requirements

The remote computer for your database backup can be either a server or a workstation that meets the following requirements:

- The operating system must be Windows Server 2003, Windows 2000 Server, Windows 2000 Professional, or Windows XP Professional.
- The drive partition for the remote directory must be NTFS.
- The directory you use for the backup must have enough space available to hold the backup files. For more information on calculating disk space requirements, see "Calculating the capacity requirements for database backups" on page 1008.

Network requirements

- The remote computer must be in the same network as the server in Symposium Call Center Server.
- The network connection should be through the CLAN. Ensure that the CLAN has low traffic during the scheduled time for the database backup. If you run the backup when CLAN traffic is high, the database backup may take longer than planned.

Tape drive requirements and maintenance

If you are using a tape to back up your database, read this section to understand tape drive requirements and maintenance steps.

Tape drives

Use a SCSI tape drive listed on the Microsoft Compatibility List for Windows Server 2003 or Windows 2000 on the Microsoft web site. Ensure that the SCSI ID for the tape drive does not conflict with existing SCSI IDs configured for other server devices.

You can use 1/4-inch cartridge and 4-mm and 8-mm digital audio (DAT) formats drives.

The drive can be internal or external to the server.

Head-cleaning kit

Nortel recommends purchasing a head-cleaning kit to prolong the life of your tape heads and ensure the quality of your backups. You should clean tape drives based on how often they are used.

Tape cartridges used per day	1	2	3	4 or more
Cleaning interval	Weekly	Every other day	Every other day	Daily

Most cleaning kits suggest how often heads should be cleaned.

Dedicated tapes for backup types

Use one backup tape for each backup, regardless of whether extra space is available on the tape. Make sure you have enough backup tapes on hand so that you can save backups for a safe period of time before you have to overwrite an old backup.

CAUTION

Risk of overwriting data

After a backup, the tape is not ejected from the tape drive. Ensure that you eject the tape after each backup to prevent the next backup from overwriting the data.

Tape size

Ensure that the backup tape is large enough to store the data you are backing up. You cannot use multiple backup tapes for a single backup. For more information on calculating tape capacity requirements, see "Calculating the capacity requirements for database backups" on page 1008.

Tape rotation

Rotate tapes daily and store them at an off-site location. Do not keep a tape in the tape drive for more than one or two days for the following reasons:

- The next backup may overwrite existing data on the tape. If the same tape is used for several consecutive nightly backups and the tape becomes damaged, no other backup is available to restore lost data.
- Consistent reuse of the same tape accelerates wear on the tape. Tapes may need replacement earlier than their normal life span.

Nortel recommends storing backup tapes off-site for as long as possible before reusing them. Store tapes for at least two weeks.

Checklist for performing backups

Introduction

Follow the steps in this checklist for performing backups.

Step	✔
After installing your server, or after making changes to your server configuration (for example, IP addresses), create a Platform Recovery Disk. For more information, see "To create a Platform Recovery Disk" on page 1005.	
Decide whether to use tape backups or remote directory backups, and configure the setting on Symposium Call Center Server. For more information, see Section A: "Setting up backup options," on page 1011.	
If you are backing up to a tape, ensure that you have the following: ■ enough backup tapes to rotate them. See page 1003. ■ a head-cleaning kit. Also ensure that you clean the tape drive regularly. See page 1002.	
Schedule a daily database backup from the client PC. See page 1031. **Note:** You may also want to plan an offline full backup using a third-party backup utility.	

CAUTION

Risk of data loss

The server does not contain a default backup schedule. Perform a backup after all system hardware and software are installed and also before and after any upgrade. Schedule a daily database backup.

Creating a Platform Recovery Disk

Introduction

When you create a Platform Recovery Disk, the system saves both server and database configuration data into a series of text files. You must keep an up-to-date Platform Recovery Disk available in case you need to recover your server software, database, or both. You also need this disk for upgrade and migration procedures. Nortel recommends you create a Platform Recovery disk after any major modifications to the system.

You can create a Platform Recovery Disk on either a floppy disk or a remote directory on a network computer.

Note: If you want to use a remote computer, you must first map the directory on the network computer to a network drive on your server. The name of the remote directory into which you save the Platform Recovery Disk must not contain any spaces. Spaces in the remote directory name cause errors.

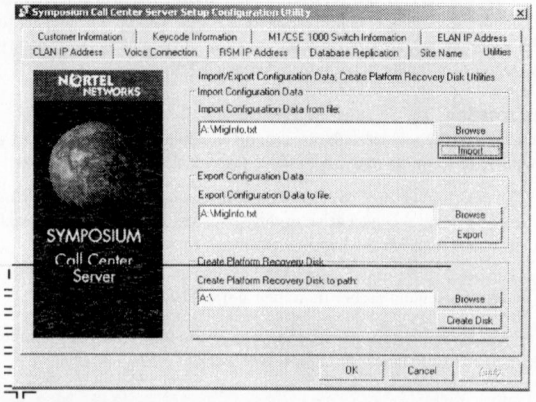
To create a Platform Recovery Disk

1 Log on to the server as **NGenSys**.

2 From the Windows Start menu, choose Programs → Symposium Call Center Server → Server Setup Configuration.

Result: The Symposium Call Center Server Setup Configuration Utility window appears.

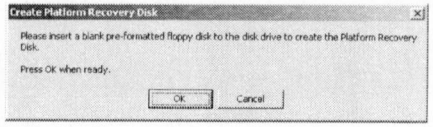
3 Click the Utilities tab to display the following:



4 In the Create Platform Recovery Disk section, do one of the following:

- If you want to create a Platform Recovery Disk on a floppy disk:
  a. Make sure the path shows A:\.
  b. Insert a blank floppy disk in drive A.
  c. Click Create Disk.

  Result: The following message appears:



  d. Click OK.
- If you want to create a Platform Recovery Disk in a directory on a network computer:

a. Make sure you have mapped a network drive to the remote directory in which you want to save the Platform Recovery Disk.

Note: The name of the remote directory into which you save the Platform Recovery Disk must not contain any spaces. Spaces in the remote directory name cause errors.

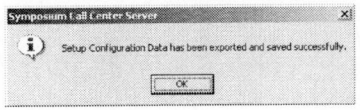
b. Click Browse and navigate to the mapped drive.

c. Select the directory, and then click OK.

Result: The drive you selected appears to the left of the Browse button.

d. Click Create Disk.

Result: The system exports files containing the server's setup record and database configuration to the disk or remote directory. When the process is complete, the following window appears:



5 Click OK. If you used a floppy disk, remove it from the drive, and make sure it is labeled clearly.

6 Close the Symposium Call Center Server Setup Configuration Utility window.

7 Store the Platform Recovery Disk in a safe place.

Calculating the capacity requirements for database backups

Introduction

Before you perform a database backup, you must ensure that the tape or remote directory used for a database backup has enough capacity to hold the backup files. To calculate the amount of space required in the tape or remote directory, you have two options, based on the version of the Symposium Call Center Server software installed on the computer on which you are performing the backup.

- **Symposium Call Center Server Releases 4.0/4.2/5.0** You can use the DBSpace utility included on the Release 5.0 Server Supplementary CD-ROM. For more information, see "To calculate the capacity requirements for database backups using the DBSpace utility" on page 1008.
- **Symposium Call Center Server Release 4.2 /5.0 only** You can access a new database view called SCCSDBSpace by installing the SU04S Service Update pack from the Release 4.2 Server Supplementary CD-ROM. After you apply this SU, create a custom report to extract the contents of the new database view. For more information, see "To calculate the capacity requirements for database backups using the SCCSDBSpace view (on Release 5.0 servers only)" on page 1009.

To calculate the capacity requirements for database backups using the DBSpace utility

You can use the DBSpace utility to calculate the amount of data that you have stored in each of the blue, CBC, and master databases, and then calculate the total amount of data stored, in megabytes.

Note: Since the amount of data stored can change between the time when you run this utility and the time when you back up your database, as an extra precaution, it is a good idea to add a 15 to 30 percent buffer to the amount shown in the Total row of the UsedDBSpace column in the utility window.

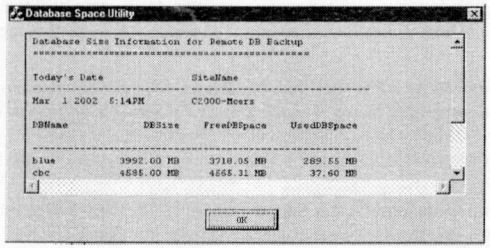
1 In Windows, open a MS-DOS window.

2 Navigate to D:\Nortel\iccm\bin\dbspace.exe

3 Type **dbspace.exe <*sysadmin password*>**, and then press Enter. For example, if the sysadmin password for your server is *nortel1*, then type dbspace.exe nortel1, and press Enter.

Note: Leave a space between the file name and the sysadmin password. (The sysadmin password is set from the client).

Result: The Database Space Utility opens and calculates the amount of data stored in the database.



4 In the window, note the values in the UsedDBSpace column. These values show the amount of data stored in each database (blue, CBC, and master). Use the scroll bar to view the bottom portion of the pane where the total amount is listed. The total value shown in the UsedDBSpace column is the amount of space that you need to have available in a tape or remote directory before you perform a database backup (plus the 15 to 30 percent buffer to safely perform the database backups without any space constraints).

5 Click OK to close the window.

Tip: For your reference, the system creates a replica of the utility results and stores it in a text file called dbspace.txt.

To calculate the capacity requirements for database backups using the SCCSDBSpace view (on Release 5.0 servers only)

On servers running Release 5.0 of Symposium Call Center Server, you can create a custom report to access the contents of the SCCSDBSpace view.

When you generate your custom report, you will see the following information:

- the amount of space allocated to the Symposium Call Center Server databases (blue, master, and CBC)
- the amount of space used by the databases
- the amount of allocated space that is unused

1 Create a custom report with the report writing application of your choice (for example, Crystal Reports). The custom report must point to the "SCCSDBSpace" view on the server. For information on creating custom reports, see the documentation included with your report writing application.

2 Generate the report to view the capacity requirements for your database backup.

Section A: Setting up backup options

In this section

Overview

Introduction

Before you schedule your database backups, you must determine which backup option you want to use and set it up on Symposium Call Center Server. Your options are

- backing up to a remote directory on a network computer
- backing up to a tape in a local tape drive

If required, you can switch between these methods; however, you cannot use both methods simultaneously.

You set your database backup option on Symposium Call Center Server using the procedures in this section. Then you schedule the backup from the client PC as described in Section B: "Scheduling backups," on page 1029.

Note: There are no predefined backup schedules.

Pros and cons of tape backups and remote directory backups

Tape backups

Pros	Cons
▪ not affected by network instability ▪ no dependency on low network traffic	▪ requires maintenance of tape drive and tapes ▪ possibility of mechanical failure of tapes and drives ▪ backup data is readable only by Sybase backup server; cannot be read by Windows backup utility ▪ for technical support, tapes must be handed off or shipped; data cannot be transmitted electronically

Remote directory backups

Pros	Cons
▪ for technical support, backup data can be transmitted electronically ▪ backup data files can be recognized by the Windows file system ▪ low maintenance and not prone to mechanical failure	▪ requires a stable network ▪ must be scheduled when network traffic is low ▪ requires an archiving plan for backup files after each backup to ensure the files are not overwritten

Setting up tape backups

Introduction

You can back up your database to a tape in a local tape drive on your Symposium Call Center Server. You choose the tape backup option through a window in the server software.

When you do a fresh installation of the Symposium Call Center Server software, the default setting is tape backup. If you want to confirm that your server is set to tape backup, or if you want to change from remote directory backup to tape backup, use the following procedure.

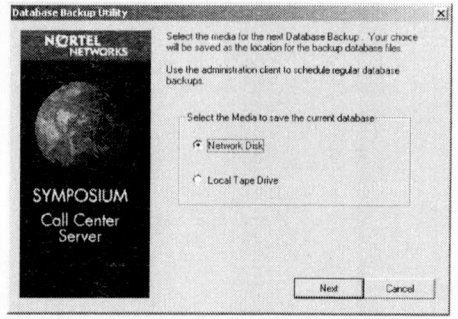
Once you have completed these steps, the next scheduled backup goes to the tape drive.

To set up a tape backup

1 Log on to the server as **NGenSys**.

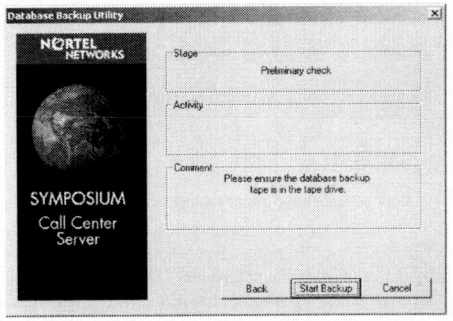
2 From the Windows Start menu, choose Programs → Symposium Call Center Server → Database Backup Utility.

Result: The Database Backup Utility window appears.



3 Select Local Tape Drive, and then click Next.

Result: The Start Backup window appears.



4 To back up the database now, skip to 5 of this procedure for instructions. To schedule your backup at a later time, click Cancel, and then see Section B: "Scheduling backups," on page 1029 for instructions on how to schedule the backup.

Result: The backup option is set to tape backup.

- If you want to schedule a backup, see Section B: "Scheduling backups," on page 1029.
- If your backup is already scheduled, the system automatically sends the backup to the tape drive.

5 To perform a backup immediately, click Start Backup.

Result: The Command Prompt window displays the following text:

```
Now backing up the databases to
\\computername\sharename
```

The remote backup process begins. This can take from 30 minutes to 3 hours to complete, depending on the size of your database, the speed of your computer, and network traffic. Leave the Command Prompt window open so you can see the backup completion message.

6 Wait until the following message appears in the Command Prompt window:

```
---------------------------------
```



```
Database backup is complete.

---------------------------------

The backup log for your backup is located here.

d:\Nortel\Utilities\backup.log.txt

Please examine it for errors.
```

7 Navigate to *D*:\Nortel\Utilities and open the file backup.log.txt. If your database backup was successful, the log contains the following lines of text:

```
[SERVER MESSAGE]:Backup Server: 3.42.1.1: DUMP is
complete (database cbc).

[SERVER MESSAGE]:Backup Server: 3.42.1.1: DUMP is
complete (database blue).

[SERVER MESSAGE]:Backup Server: 3.42.1.1: DUMP is
complete (database master).

This database backup log does not have any errors or
warnings.
```

8 Do one of the following:

- If your database backup log contains the text in the previous example, your backup was successful.
- If your database backup log contained any messages or errors, this could indicate a problem with the backup. Navigate to the folder D:\Sybase\install and open the file backup.log.txt. This file may indicate the source of the problem. Retry the backup and check the backup log again. If there are still messages or errors, contact Nortel product support.

Setting up remote directory backups

Introduction

You can back up your database to a remote directory on a network computer. You choose this option through a window on Symposium Call Center Server. However, you must first complete a series of steps to set up the connection between the server in Symposium Call Center Server and the remote directory. To set up a remote directory backup, you must complete the following tasks:

1. Prepare the network computer:
   - Create a local Windows user account with administrator privileges.
   - Create a shared directory to contain the remote database backup files.
2. Prepare Symposium Call Center Server:
   - Create an identical local Windows user account with administrator privileges.
   - Add the account to the policy "Log on as a service."
   - Enter the account and path information through a window in Symposium Call Center Server, and deselect the tape backup option.

Once you have completed these steps, the next scheduled backup goes to the remote directory. See the following detailed procedures.

ATTENTION

After you configure the remote directory for backup and restore, check your configuration before backing up or restoring the database by following the guidelines listed in the section "Testing the remote directory backup and restore configuration" on page 1026.

Files created during remote directory backup

The backup process creates three files:

blue.dmp	Contains the contents of the Blue database
cbc.dmp	Contains the contents of the CBC database
master.dmp	Contains the contents of the Master database

CAUTION

Risk of database restoration error

If you need to restore your database, the restore program looks for the exact file names listed above. If you change the file names for archiving purposes—for example, by adding a date to the name—you must change the names back to their original state before you try to restore the database. Otherwise, the restore process fails.

Before you start

Make sure that your remote computer and the network meet the requirements identified in "Requirements for backups" on page 1001.

Worksheet for setting up a remote directory backup

You must set up accounts, passwords, and a shared directory in preparation for remote directory backups. Create names for these items ahead of time and record them in the table below.

Item	Fill in the required information
User name You must create a name and assign it to two user accounts—one on the network computer and the other on Symposium Call Center Server. The name must be identical on both computers.	
User account password You must create a password and assign it to the two accounts described above. The password must be identical on both computers.	
Computer name of the network computer Obtain and record this name so you have it available when you set up the remote directory backup on the server.	
Share name for the remote directory You must create and assign a share name to the directory on the remote computer. The share name can be the directory name (this is the default in Windows) or a different name. **Note:** The share name for the remote directory must not contain any spaces. Spaces in the remote directory name will cause errors.	

Preparing the network computer for remote directory backup

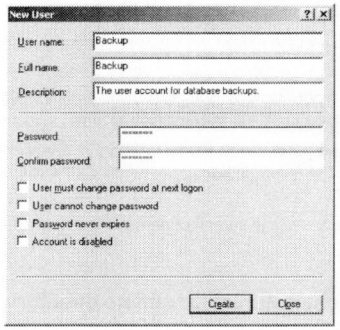
Once you determine which network computer you will use for the remote directory backup, you must create a local Windows user account on it, and then create a shared directory to contain the remote backup. Use the basic steps below, along with the documentation that came with the operating system, to correctly set up the user account and shared directory.

Note: The following procedures do not provide detailed steps, since they differ depending on the operating system on your network computer.

To create the local Windows user account on the network computer

1 Create a new user account in Windows using the user name and password that you recorded in the worksheet.

- Create the new user in Programs → Administrative Tools → Computer Management. Right-click Local Users and Groups, and then select New User from the resulting pop-up menu. Type the user account details in the New User window.



CAUTION

Risk of database backup failure

When you are creating the new user account in Windows, you must deselect the check box for "User must change password at next logon." If this check box is selected, Symposium Call Center Server may not be able to connect to the remote computer.

2 Make the user account a member of the Administrators group.

To create and share the remote directory on the network computer

1 On the network computer, create a directory (folder) to contain the database backup. You can use the share name you recorded in the worksheet.

Note: The name of the remote directory must *not* contain any spaces. Spaces in the remote directory name will cause errors.

2 Make sure file sharing is enabled on your computer.

3 Make the directory shared, and assign the share name that you recorded in the worksheet.

4 For the shared directory permissions, grant Full Control access rights to the user account that you created in the previous procedure.

Result: The network computer is now set up for remote directory backups. You must now prepare the server in Symposium Call Center Server using the following procedures.

5 Make sure you have recorded the computer name of the network computer in the worksheet.

Preparing Symposium Call Center Server for remote directory backup

On your Symposium Call Center Server, you must create a local Windows user account that is identical to the one you created on the network computer. You then add the account to the policy "Log on as a service." To complete preparation of the server, you enter the account information and the path of the remote directory in Symposium Call Center Server and turn off the tape backup option. See the detailed procedures below.

To set up the local Windows user account on the new server

1 Log on to the new server in Symposium Call Center Server as **NGenSys**.

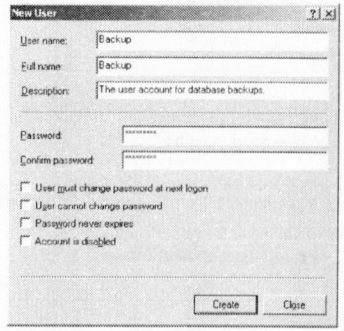
2 From the Start menu, choose Programs → Administrative Tools → Computer Management.

Result: The Computer Management window appears.

3 In the left panel, navigate to Local Users and Groups → Users.

4 Right-click on the Users folder, and then select New User.

Result: The New User window appears.



5 In the User name box, type the name you recorded in the worksheet on page 1019. This must be the same user name you assigned to the account on the network computer.

6 In the Password box, type the password you recorded in the worksheet on page 1019. This must be the same password you assigned to the account on the network computer.

7 In the Confirm password box, type the password again.

8 Uncheck the check box for User must change password at next logon.

Note: If you do not remove this check mark, the restore may fail because the server in Symposium Call Center Server may not be able to access the network computer.

9 Click Create.

10 Click Close.

11 In the left panel of the Computer Management window, click the Users folder to display its contents in the right panel.

12 In the right panel, right-click the new user you just created, and then select Properties.

Result: The Properties window for the user appears.

13 Click the Member Of tab.

14 Click Add.

Result: The Select Groups window appears.

15 In the Name column, click Administrators, and then click Add.

Result: The group appears in the bottom list box.

16 Click OK.

17 When the Member Of tab reappears, click Apply, and then click Close.

18 Close all windows that remain open.

To set up the local security settings

1 On the server in Symposium Call Center Server, select Start → Programs → Administrative Tools → Local Security Policy.

Result: The Local Security Settings window appears.

2 In the left panel, navigate to Local Policies → User Rights Assignment. Click User Rights Assignment to view its contents in the right panel.

3 From the right panel, double-click Log on as a service.

Result: The Local Security Policy Setting window appears.

4 Click Add.

Result: The Select Users or Groups window appears.

5 In the Name column, select the user account that you just created, and then click Add.

Result: The account appears in the bottom list box.

6 Click OK.

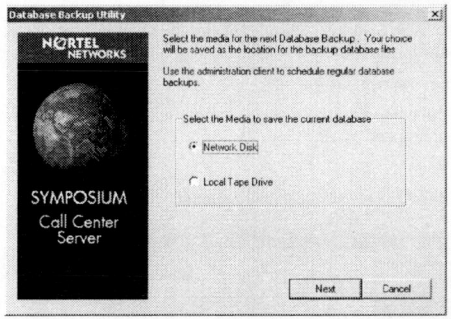
7 Click OK to close the Local Security Policy Setting window.

8 Close the Local Security Settings window.

To complete the remote backup settings on the new server

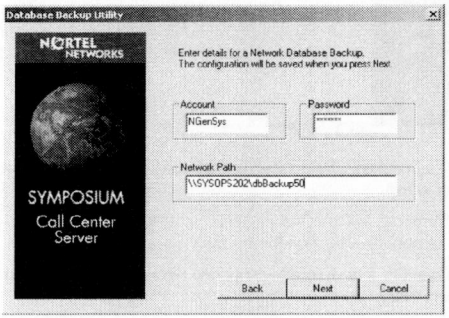
1 On the server in Symposium Call Center Server, select Start → Programs → Symposium Call Center Server → Database Backup Utility.

Result: The Database Backup Utility window appears.



2 Make sure Network Disk is selected, and then click Next.

Result: The Configuration window appears.



3 In the Account box, type the user name you recorded in the worksheet on page 1019. This must be the same user name you assigned to the account on both the network computer and the server.

4 In the Password box, type the password you recorded in the worksheet on page 1019. This must be the same password you assigned to the account on both the network computer and the server.

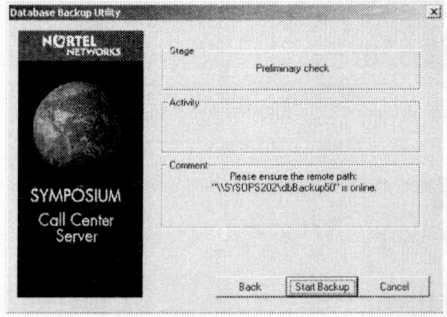
5 In the Path box, type the network path for the shared directory you created on the network computer. Use the following format:

- computername\sharename

Refer to the computer name and share name that you recorded in the worksheet on page 1019.

6 Click Next.

Result: The Start Backup window appears.



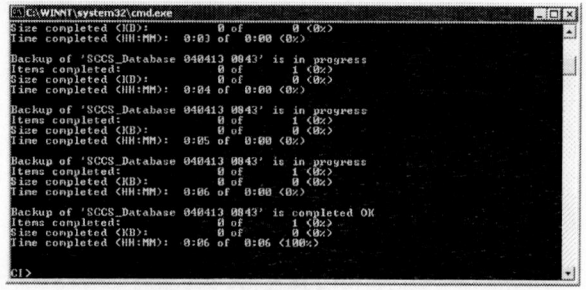
7 To start your backup, skip to step 8; otherwise, click Cancel to save your settings and exit.

Result: Symposium Call Center Server is now set to restore the database from the remote directory on the network computer.

- If you want to schedule a backup, see Section B: "Scheduling backups," on page 1029.
- If your backup is already scheduled, the system automatically sends the database backup files to the remote directory.

8 Click Start Backup.

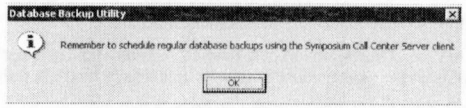
Result: A DOS window appears showing the progress of the database backup.



9 When the backup is completed, press Enter and then type **QUIT** at the prompt.

10 Close the Database Backup Utility.

Result: The following message appears:



11 Click OK.

Testing the remote directory backup and restore configuration

To ensure that you have configured the remote directory backup correctly, after completing the previous configuration procedure, perform the following steps before backing up to, or restoring from, the remote directory. Before a migration, it is important that you perform these steps on both the original server (before backing up your database) and on the new server (before restoring the database).

Check the physical connection between server and remote PC

1 On the server in Symposium Call Center Server, use the remote PC computer name to ping the remote PC. This enables you to check the physical network connection between the server and the remote PC.

2 If you cannot ping the remote PC from the server in Symposium Call Center Server, check the remote PC computer name, DNS configuration, and the physical network connection between the server and the remote PC (for example, the IP address and router configuration).

Check the access to the shared folder

1 On the server, log on to Windows using the local Windows user account that you created on the server. For more information on this account, see "To set up the local Windows user account on the new server" on page 1022.

2 On the server, temporarily map to the shared folder on the remote PC as a mapped network drive.

3 To check the access level to this mapped folder, on the server, copy any small file (for example, a text file) and paste it into this mapped drive. Then delete this file from the mapped drive.

4 If the system prompts you to enter the user name and password for the shared folder, then check that the user name and password for the Windows user accounts are synchronized on the server and the remote PC.

5 If you cannot paste the copied file into the shared folder, or delete the file from it, then on the remote PC check that the Windows user account has been granted Full Control access rights.

6 On the server, unmap the shared folder and log off the server.

Perform a test backup

After configuring the remote backup, you can schedule a backup and check the results in the backup log file when the backup is complete. For instructions, see Section B: "Scheduling backups," on page 1029.

Note: Make sure you do this when there is low network traffic.

Section B: Scheduling backups

In this section

Overview

Introduction

Use the Backup Scheduler on the client PC to schedule backups for the server. There are no predefined backup schedules.

Administrative privileges required

To schedule backups, you must log on to the server from the client PC as sysadmin.

Scheduling a backup

Introduction

To ensure that your system information can be restored after a hardware failure or data corruption, schedule regular backups. For scheduling suggestions, see "When to use a database backup" on page 990.

You can back up your database either to a local tape drive or to a remote directory on a network computer. You must configure one of these options on your Symposium Call Center Server *before* scheduling a backup. For more information, see Section A: "Setting up backup options," on page 1011.

ATTENTION

In the following procedure, you must select PrimaryServerTape as the backup device for both tape backups and remote directory backups.

Note: To recover your system, you must have a Platform Recovery Disk. See "To create a Platform Recovery Disk" on page 1005.

Overwriting data

Remote directory backups

When you schedule regular backups to a remote directory, the backup program overwrites any existing database backup files in the remote directory with new versions of those files. To avoid overwriting the database backup files, move each set from the remote directory to another location following each backup, and store them according to the date when they were created. For a list of files created at each backup, see "Files created during remote directory backup" on page 1018.

Tape backups

When you schedule a backup to tape, the overwrite option is selected automatically. This option overwrites any data on the tape. To avoid overwriting the data after a scheduled backup, remove and replace the tape, make sure it is labeled appropriately, and store it in a safe place.

To prepare tapes prior to a scheduled backup

1. Remove the write-protect tabs from the backup tapes.
2. Label your backup tapes with the following information:
   - backup date and time
   - backup files
   - name of person who is performing the backup
3. Insert the tape properly into the tape drive on the server.

CAUTION

Risk of equipment damage

If you insert the tape incorrectly, you run the risk of damaging your system.

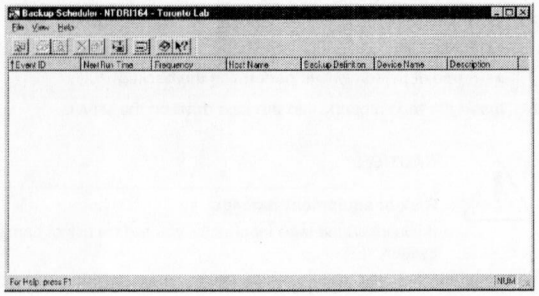
To schedule a backup (for both tape and remote directory backups)

1. Make sure the services on your server are up.

   Note: A database backup uses the HDM service. If this service is down, the database backup cannot start, and the system will generate an error message in the Backup Status window stating that the backup completed abnormally.
2. At the client PC, log on to the server as **sysadmin**.

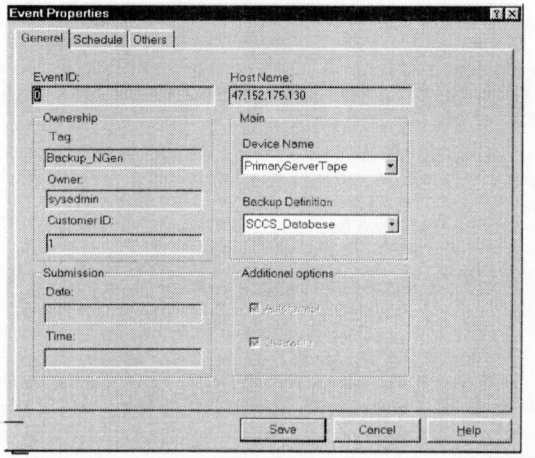
3 From the SMI window, choose System Administration → Server Backup → Backup Scheduler.

Result: The Backup Scheduler window appears.



4 In the Backup Scheduler window, choose File → New Schedule.

Result: The Event Properties window appears.

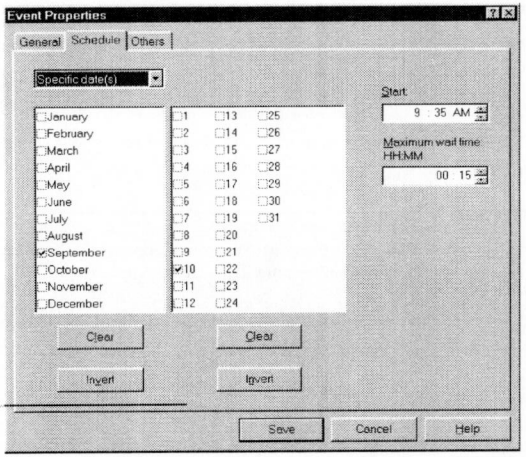


5 In the Device Name box, ensure that PrimaryServerTape is selected.

Note: This is the default value. This value applies to both tape backups and remote directory backups.

6 Click the Schedule tab.

Result: The Schedule property page appears.



7 Select the type of schedule (daily, weekly, monthly, yearly, or specific date).

8 Select the month, day, or date on which the backup should run. (The options available depend on the type of schedule selected.)

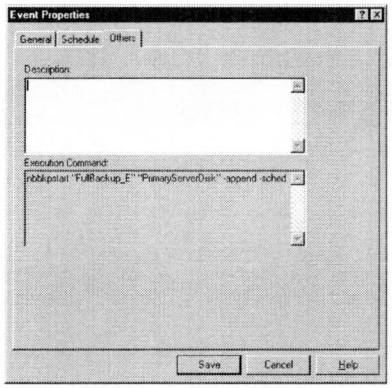
9 In the Start box, select the time to start the backup.

Note: The backup is scheduled according to the server time, which is not necessarily the same as the client PC time.

10 In the Maximum wait time box, enter the length of time the system can wait before starting the backup. This time is required in case a scheduling conflict with other tasks forces the backup to wait. If the wait time expires before the backup is able to start, then the backup is skipped. For example, you can schedule a backup for a non-peak period, but in 3 hours the morning shift arrives. In this case, you can enter 03:00 as the interval time. This ensures that the backup does not take place when the morning shift arrives.

11 Click the Others tab.

Result: The Others property page appears.



12 In the Description box, type the description or the purpose of the backup.

13 Click Save.

Result: The backup is scheduled.

Monitoring backups

Introduction

You can monitor the status of a running backup with the Backup Status window on the client PC. To view the Backup Status window, from the Backup Scheduler window, select View → View backup status.

Backup Status window

The Backup Status window shows whether any files were skipped or copied in error during a database backup.

If any files are not copied successfully, a minor alarm is generated. Obtain the Event ID from the alarm in the Alarms Monitor for more information.

Using log files

To verify that a backup was successful, use a text editor (such as Notepad or WordPad) to check the backup log. The backup log is generated at the end of the backup, and is stored on the server in the following directory:

D:\Nortel\data\backup\backuplogs

The file name for a backup log is SCCS_Database *yymmdd hhmm*.LOG, where *yymmdd hhmm* are the date and time of the backup (for example, 011117 1415 represents 2:15 p.m. on November 17, 2001).

Note: The contents of the backup log are the same whether you back up to tape or to a remote directory.

If a database backup is successful, the backup log contains all of the following messages:

```
[DATE/TIME] - Starting backup of 'SCCS_Database' to device
'PrimaryServerTape' ...
```



```
[SERVER MESSAGE]:Backup Server: 3.42.1.1: DUMP is complete
(database cbc).

[SERVER MESSAGE]:Backup Server: 3.42.1.1: DUMP is complete
(database blue).

[SERVER MESSAGE]:Backup Server: 3.42.1.1: DUMP is complete
(database master).


[DATE/TIME] - The backup of 'SCCS_Database' was completed
successfully.
```

ATTENTION

The text `Starting backup of 'SCCS_Database' to device 'PrimaryServerTape'` appears for both tape backups and remote database backups.

Make sure that there are no error messages in the log file. The following example shows a log file with errors:

```
[DATE/TIME] - Starting backup of 'SCCS_Database' to device
'PrimaryServerTape' ...


[SERVER MESSAGE]:Backup Server: 3.42.1.1: DUMP is complete
(database cbc).

Msg 408202, Level 2, State 41

This database backup has errors or warnings.


[DATE/TIME] - The backup of 'SCCS_Database' failed.
```

If your database backup produces error messages, repeat the backup. If it produces error messages again, contact Nortel customer support.

Other procedures for backups

Introduction

You can change any detail of a scheduled backup using the Event Properties window. You can also delete backups from this window.

To change a scheduled backup

On the Backup Scheduler window, double-click the scheduled backup that you want to change.

For step-by-step instructions, press F1 to access the online Help.

To delete a scheduled backup

On the Backup Scheduler window, select the scheduled backup that you want to delete, and then choose File → Delete.

For step-by-step instructions, press F1 to access the online Help.

To cancel a running backup

Click Cancel in the Backup Status window.

Note: If you cancel the backup, any data that was written to the backup device is unusable.

Section C: Using a third-party backup utility to create full backups

In this section

Overview

Introduction

You can create a full backup so that you can restore Symposium Call Center Server to its state at the time of the backup. This type of backup is useful for recovery from situations such as a catastrophic failure in the disk subsystem.

To perform a full backup in Symposium Call Center Server Release 5.0 (standalone or coresident), you must use a third-party backup utility, such as the Windows backup utility. This section provides guidelines for selecting the third-party backup software you will use, and describes the procedures you must complete before performing the third-party backup.

Nortel recommends that you perform a full backup

- after the initial Symposium Call Center Server installation and configuration
- before and after a major upgrade to a new release
- before and after any major hardware configuration changes

Guidelines for third-party backup software

Introduction

The third-party backup software must meet the requirements listed in this section.

Requirements for third-party backup software

- The third-party backup software must not reduce the hard disk space available to Symposium Call Center Server and the Windows Server 2003 operating system below the minimum required.
- The installation or uninstallation of the third-party backup software must not impact or conflict with Symposium Call Center Server software (for example, it must not cause .DLL conflicts). If such conflicts are discovered, a rebuild of the server may be necessary.
- If the third-party backup software has its own database, it must not impact the Symposium Call Center Server database.
- The third-party backup software must not interfere with Symposium Call Center Server services in any way (for example, causing improper or out-of-sequence shutdowns).
- During run-time, the third-party backup software must not degrade the Symposium Call Center Server system beyond an average 50 percent CPU utilization.
- You must run the third-party backup manually. Do not schedule the third-party backup to run in automatic mode.

ATTENTION

Services associated with the third-party backup must not run while Symposium Call Center Server is running.

- If you are using a tape drive for your backups, the third-party backup system can use a dedicated tape drive, or it can share the tape drive used for Symposium Call Center Server database backups.

- If the third-party backup and the Symposium Call Center Server database backup have dedicated tape drives, the tape drive used for the database backup must be configured with the device name "Tape0."
- If the third-party backup and the Symposium Call Center Server database backup share a tape drive, the drive must meet the requirements of Symposium Call Center Server (see "Tape drive requirements" on page 51).

- For backups to a remote directory, the third-party backup must not interfere with the server ports used for network connections by Symposium Call Center Server.
- Before putting Symposium Call Center Server in operation, perform comprehensive coresidency testing of the server and the third-party backup utility.
- Disk imaging is supported.

Preparing for third-party backups

Introduction

The customer must define a backup and restore process based on the third-party utility used (for example, Windows backup). This section describes procedures that must be completed before beginning a full backup using a third-party utility. Refer to your third-party documentation for information on the full backup procedure.

When performing a full backup, you must perform the following steps in the order listed below. Each step is detailed in the following pages:

1. Shut down the Symposium Call Center Server services using the Shutdown utility.
2. Stop the database services from running by using the Stop Sybase Services utility.
3. Perform the full backup using the third-party utility of your choice.
4. Start the database services using the Start Sybase Services utility.
5. Start the Symposium Call Center Server services using the Startup utility.

To prepare your server for a full backup

1 Shut down all Symposium Call Center Server services using the Shutdown utility as follows:

a. From the Windows Start menu, choose Programs → Symposium Call Center Server → Shutdown.

Result: The Symposium Call Center Server Shutdown window appears.

b. Click OK.

Result: The utility shuts down all services, and then the Service Status Log window appears. This log displays any services that failed to shut down. Click Recheck to refresh the service statuses.

c. If any services are still running, in the control panel, click the Administrative Tools → Services icon to manually shut down the listed services. Then click Recheck to update the status log.

d. Click Accept to exit the utility.

2 Shut down the database services using the Stop Sybase Services utility as follows:

ATTENTION

You must shut down the Symposium Call Center Server Services as outlined in step 1 *before* shutting down the database services. Failure to do so can result in database corruption.

a. From the Windows Start menu, choose Programs → Sybase → Stop Sybase Services.

Result: The Symposium Call Center Server Shutdown window appears.

b. Click OK.

Result: The utility shuts down the Sybase backup server, monitor server, and the Sybase server. When all services are shut down, the Service Status Log appears.

c. Verify that all services have been successfully shut down. If any services cannot be shut down, contact Nortel support personnel.

d. If all services have been successfully shut down, click Accept to exit the shutdown utility, and then proceed with the full backup.

3 Based on the type of backup you want to perform, you have the following choices:

- To do a full backup of only the database files, proceed to step 7.
- To do a full backup of the database files *and* all of the operating system files, continue with the following step.

4 To back up the entire system (for example, if you want to back up all of the operating system files in addition to the database files), then, depending on the backup utility you are using, you may need to use the Services window in the Control Panel to make sure the services listed below are shut down.

Note: Some third-party backup utilities require that you manually shut down the following services. If you do not shut them down as follows, then some Windows files may not be backed up.

Click Start → Settings → Control Panel → Administrative Tools → Services.

Result: The following services are shown:

- Telephony
- TCP/IP NetBIOS Helper Service
- SNMP Service
- Simple TCP/IP Services
- Server
- Protected Storage
- Messenger
- License Logging Service

5 To shut down the services, select the service, and then click Stop.

6 Once complete, click Close on the Services control panel.

7 Back up the server. You must select the following options before starting the full backup:

- verify backup—This ensures that the backup was made successfully.
- back up local registry—This is a required option to back up all of the server's configuration details. The third-party backup utility must support registry backups.

Note: You may want to use the compression option (if available) to make sure all of the data on the server can be backed up.

The following drives must be backed up:

- C:—Windows operating system, pcAnywhere
- D:—Symposium Call Center Server, SysOps.log file, Sybase executables
- all drives greater than and including F: - Database drives

To perform the backup

1 Start the backup from the third-party utility.

2 When the backup is complete, restart your server.

3 When the server is restarted, use the Start Sybase Services utility to restart the database services, as follows:

ATTENTION

Do not attempt to restart the database services if the Symposium Call Center Server services are running. The Symposium Call Center Server services must be shut down before starting the database services. After starting the database services, then start the Symposium Call Center Server services.

a. From the Windows Start menu, choose Programs → Sybase → Start Sybase Services.

Result: The Symposium Call Center Server Startup window appears.

b. Click OK to start the Sybase services.

Result: The services start up. When all services have successfully started, the Startup Complete window appears.

c. Click OK to exit this window.

4 When the database services have been started, start the Symposium Call Center Server services as follows:

a. From the Windows Start menu, choose Programs → Symposium Call Center Server → Startup.

Result: The Symposium Call Center Server Startup window appears.

b. Click OK.

Result: After all services have started, the Startup Complete window appears.

c. Click OK to exit the window.

Chapter 20

Restoring data

In this chapter

Overview

Introduction

There are a number of recovery methods available for your system (Symposium Call Center Server or Network Control Center). The method you choose depends on the problem you encounter and the backup data and media available to you.

Note: Before using these recovery procedures, check your regional Symposium Call Center Server technical web site for updated customer documentation and installation addenda.

Coresident server

This chapter shows you how to schedule a restore of Symposium Call Center Server Release 5.0. To restore a coresident server, see Section B: "Recovery using a third-party backup," on page 1085. To restore the Symposium Call Center Symposium Web Client or TAPI, see the following guides:

- *Nortel Symposium Call Center Web Client Planning, Installation, and Administration Guide*
- *Network Manager's Guide for Symposium TAPI Service Provider for Succession, Release 3.0* (for TAPI)

Recovery using a database backup and Platform Recovery Disk

The following table lists the recovery methods that use database backups and Platform Recovery Disks, or both. Use the table to determine which recovery scenario is appropriate for your situation. This chapter contains procedures for each method.

Recovery method	When to use (examples)	Backup data required
Full system recovery using a database backup and Platform Recovery Disk (See page 1057.)	You suspect or experience ■ file corruption that affects more than Symposium Call Center Server or Network Control Center (NCC) database (for example, you cannot boot the system because the operating system is corrupted) ■ hardware failure (for example, a hard disk failure)	Platform Recovery Disk and Database backup (must exist prior to system failure)
Recovery of the system setup configuration (See page 1059.)	You suspect problems with the setup configuration (for example, the Feature Report displays incorrect system configuration data or indicates a crash).	Platform Recovery Disk (must exist prior to configuration corruption)
Recovery of the database contents (See page 1061.)	You suspect data in the database is corrupted (for example, the system produces database error messages, you observe incorrect customer data, or your Database Integrity Check fails).	Platform Recovery Disk and Database backup (must exist prior to database corruption)
Recovery (reinstallation) of Sybase ASE 12.5 and database software (See page 1063.)	You suspect corruption in Sybase ASE 12.5 configuration or software (for example, your Sybase database server fails).	Platform Recovery Disk and Database backup

Recovery using RAID backups or third-party backups

If your system is equipped with RAID, or if you use a third-party backup utility, the following additional backup options are available:

Recovery method	When to use (examples)	Backup data required
Recovery of a system equipped with RAID: ■ full system recovery ■ recovery of a faulty hard drive (See your hardware documentation for instructions.)	■ You have performed an upgrade or another maintenance activity on the system, and you need to rebuild or restore your split RAID drives. ■ You suspect or experience hardware failure (for example, a hard disk failure).	RAID backup (for systems equipped with RAID)
Full system recovery using a third-party backup utility (See page 1085.)	In the event of a catastrophic failure (for example, the operating system will not boot, or the system crashes randomly in the operating system and application software). Use this method when the latest database backup and setup configuration data is not available for a Symposium Call Center Server or Network Control Center reinstall.	Full backup of system using a third-party backup utility

If you do not have a backup

If you do not have a Platform Recovery disk and database backup, a RAID system, or a full backup, you must do a fresh install of Symposium Call Center Server or NCC server.

Nortel does not recommend this method for recovery. If you are in this situation, contact Nortel customer support for detailed information. An overview is provided next.

Symposium Call Center Server

When you reinstall Symposium Call Center Server, you lose all of the configuration and statistics information. To recover your configuration, you must reconfigure the server following the instructions in the *Administrator's Guide*.

Network Control Center

When you reinstall the NCC, you lose all of the network configuration information. To recover the configuration, in addition to reconfiguring the NCC, you must also reconfigure and Network Communication Parameters at each server in the network.

While statistics stored at the different servers within the network are retained, they are no longer useful, since site IDs may be changed during reinstallation of the NCC. Therefore, after installation, statistics may be attributed to the incorrect server.

Section A: Recovery using Platform Recovery Disk and database backup

In this section

Overview

Introduction

The procedures in this section provide instructions for recovering a system (Symposium Call Center Server or Network Control Center) using a Platform Recovery Disk, a database backup, or both. This includes five types of recovery:

- full system recovery
- recovery of the system setup configuration
- recovery of the database contents
- recovery (reinstallation) of Sybase ASE 12.5 and database software
- recovery (reinstallation) of the server software

ATTENTION

If your recovery procedure involves restoring the database, make sure the database backup you use was created from the same system running the same software release of Symposium Call Center Server. If you attempt to restore a database backup created from a system running a different software release, the database restore will finish, but the system will not work properly. Make sure you label each database backup properly, including the software release of Symposium Call Center Server.

Common recovery procedures

Certain recovery procedures, such as restoring the database or importing database or configuration data from a Platform Recovery Disk, are used in more than one of the recovery scenarios listed above. These common procedures are located at the end of this section and are referenced where appropriate for each specific recovery scenario.

Full system recovery

Introduction

The full system recovery procedure provides instructions for recovering from system failure, such as

- file corruption that affects more than the Symposium Call Center Server or Network Control Center database
- a hardware failure (for example, a hard drive failure)

If you have a current Platform Recovery Disk and recent database backup, you can use this recovery method.

To perform a full system recovery

1 Follow the procedures for a complete uninstall in Chapter 13, "Uninstalling and reinstalling server software."

2 Follow the instructions in Chapter 11, "Migrating a Release 5.0 server to a new platform" on page 765 to reinstall the server software, Sybase software, and database files.

Note: If you suspect that the problem with the system does not affect the operating system, you may only need to uninstall the Symposium Call Center Server or Network Control Center software, Sybase ASE 12.5, and the database files, thereby leaving the operating system and drive partitions intact.

Additional steps required for servers in a networking environment

If you just recovered either an NCC server or a server that is connected to an NCC server for networking, you must perform some additional steps.

If you recover an NCC server	using the Configuration (nbconfig) utility on the NCC server, add all of the sites in your multi-site call center.

If you recover a nodal server connected to an NCC server	using the Configuration (nbconfig) utility on the NCC server, perform a force synchronization of the Address Table for all of the sites in your multi-site call center.

For more information, refer to the *Network Control Center Administrator's Guide* (see the section titled "Configuring the communications database").

When you are satisfied with the proper operation of the restored system, create a database backup. For instructions, see Chapter 19, "Backing up data." You may also want to perform a third-party backup, if available.

Recovery of the server setup configuration

Introduction

If you suspect corruption in your server setup configuration, you can recover an earlier version if you have an up-to-date copy of your system's configuration data file, MigInfo.txt. This file is created when you create a Platform Recovery Disk or when you use the Export Configuration Data utility in the Server Setup Configuration Utility.

To recover the server setup configuration

1 Make sure you have an up-to-date copy of your system's Platform Recovery Disk, or a copy of the file MigInfo.txt on a disk or in a directory that your system can access.

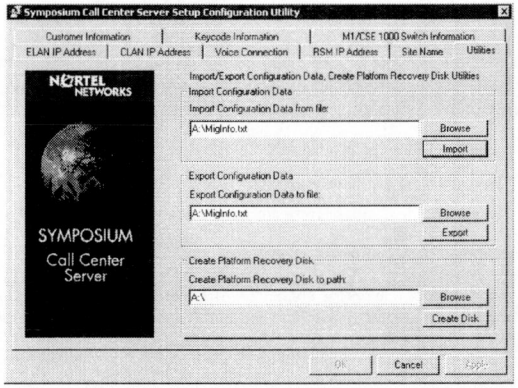
2 If your MigInfo.txt file is on a disk, insert it into the floppy drive.

3 From the Windows Start menu, choose Programs → Symposium Call Center Server → Server Setup Configuration.

Result: The Server Setup Configuration Utility appears.

4 Click the Utilities tab.

Result: The following window appears:



5 In the Import Configuration Data from file section, make sure that the path displayed is the correct location of your file MigInfo.txt. If the path is not correct, use Browse to navigate to the location of the file.

6 When the path shown is correct, click Import.

Result: The system imports your configuration data.

7 Complete steps 9 through 20 in the procedure "To configure your server's software and database by importing configuration data from the Platform Recovery Disk" on page 1077. Then continue to the following procedure.

To check that the server's services start up successfully

From the Start menu, choose Programs → Symposium Call Center Server → System Monitor.

Result: The SMonW window appears and Symposium Call Center Server services begin the startup process. The services take approximately 15 to 20 minutes to start up. For more information about the services and their statuses, see "Troubleshooting problems with Symposium Call Center Server services" on page 1170.

Recovery of the database contents

Introduction

If you suspect that data in your Symposium Call Center Server or Network Control Center database is corrupt, you can restore an existing backup of the database to the system using the Database Restore utility.

Use one of the following procedures:

- "To restore the database from a tape backup" on page 1072
- "To restore the database from a remote directory backup" on page 1074

Then continue to the following procedure.

The restore process causes the connection between the client PC and server to be lost, and the services on the server to be shut down. After the restore process is finished, restart the system, and reconnect the client PC.

Restoring a more recently backed-up database

You can restore a more recently backed-up database (4.0 or 4.2) than the database when your new Release 5.0 server is ready to go live. For example, if you upgrade from either Symposium Call Center Server Release 4.x to Release 5.0, but keep the original Release 4.x server active, then when your Release 5.0 server goes live, you can restore a more recently backed-up database. You do not have to perform another migration.

Use the Database Restore utility to perform the database restore. When the database restore is complete, the Symposium Call Center Server Database Restore utility automatically launches the Server Setup Configuration utility. Verify the configuration information, and then complete the configuration process. Running the server configuration repopulates the database with Release 5.0 data.

When restoring a more recently backed-up Release 5.0 database, you do not need to run Server Setup Configuration again.

Performing a Database Integrity Check

Nortel recommends that you perform a Database Integrity Check once you have restored your database to ensure the data is not corrupted before you return your system to full service.

For instructions, see "Performing a Database Integrity Check" on page 1116 of Chapter 21, "Using server utilities." Then continue to the following procedure.

Additional steps required for servers in a networking environment

If you just recovered the database of either an NCC server or a server that is connected to an NCC server for networking, you must perform some additional steps.

If you recover an NCC server	run the nbconfig utility on the NCC server and check to make sure that the IP addresses and site names are correct for all the servers connected to the network. If any sites are incorrect, remove and then re-add the sites.
If you recover a nodal server connected to an NCC server	run the nbconfig utility on both the NCC server and the recovered nodal server. Check to make sure that the IP addresses and site names match on both the NCC and the nodal server. If there are any differences, use the nbconfig utility on the NCC to perform a force synchronization of the Address table for all the sites in your multi-site call center.

For more information, refer to the *Network Control Center Administrator's Guide* (see the section titled "Configuring the communications database").

Recovery (reinstallation) of Sybase ASE 12.5 and database software

If you suspect that the Sybase ASE 12.5 server configuration or software is unstable, you can uninstall the database software and configuration, and then reinstall it while leaving the system software and configuration intact. You need a database backup and a Platform Recovery Disk to perform this procedure.

Checklist for recovering Sybase ASE 12.5 and database software

Complete the following steps to perform this recovery procedure. To keep on track during the procedure, take a photocopy of the checklist and check off each step as you complete it.

Description		✔
1	Prepare the system for reinstallation (see page 1063).	
2	Import the database information from the Platform Recovery Disk (see page 1064).	
3	Reinstall and initialize the database software, including Sybase ASE 12.5 (see page 1064).	
4	Restore the database contents (see page 1067).	
5	Perform a Database Integrity Check on the restored database (see page 1067).	
6	Configure the system's software and database (see page 1067).	

Preparing the system for reinstallation

Before you can reinstall the database software and restore the database, you must uninstall the existing database software that you suspect is corrupted. You can also prepare your backup data, if you do not already have it available.

To prepare the system for reinstallation

1. If you do not already have a Platform Recovery Disk, create one as described in "To create a Platform Recovery Disk" on page 1005 of Chapter 19, "Backing up data." Then continue to the next step.
2. If you do not already have a current database backup, create one as described in Chapter 19, "Backing up data." Then continue to the next step.
3. Remove the database files and Sybase software, as described in "Uninstalling the database and Sybase ASE 12.5" on page 913 of Chapter 13, "Uninstalling and reinstalling server software." Then continue to the next step.
4. Continue to the next procedure.

Importing database information from the Platform Recovery Disk

Once you have prepared the system for reinstallation, you must import database information from a current Platform Recovery Disk.

For instructions, see "Importing database information from a Platform Recovery Disk" on page 1069. Then continue to the following procedure.

Reinstalling and initializing the database software, including Sybase ASE 12.5

You must install a fresh copy of the Symposium Call Center Server database software and Sybase ASE 12.5 software supplied on the Server Application CD.

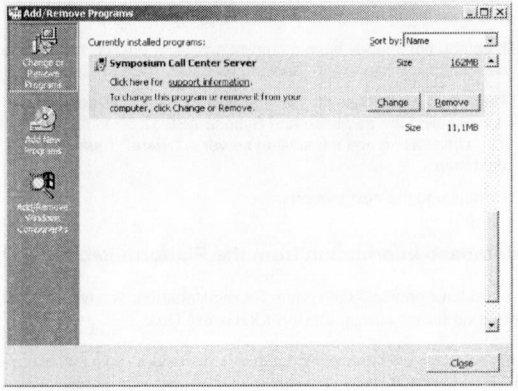
To reinstall and initialize the database software

1. Locate the Server Application CD containing the Release 5.0 software for Symposium Call Center Server and insert the CD-ROM in the drive. Wait for it to autorun.
2. From the Start menu, choose Settings → Control Panel.

   Result: The Control Panel window appears.

3 Double-click Add/Remove Programs.

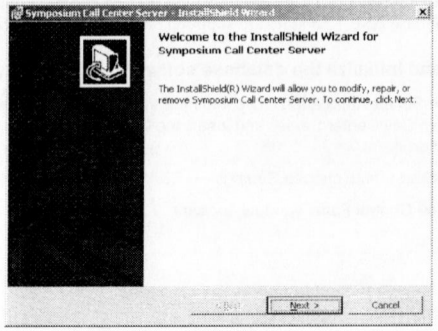
Result: The Add/Remove Programs window appears.



4 Highlight Symposium Call Center Server.

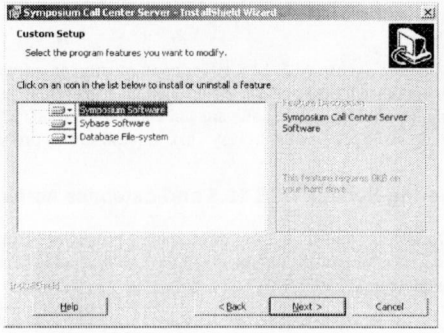
5 Click Change.

Result: The InstallShield Wizard window appears.



6 Click Next.

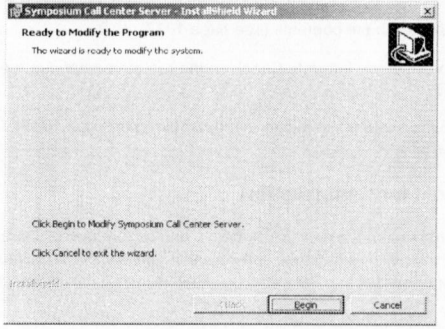
Result: A window appears showing the three Symposium components.



7 Select the Sybase software, and then select This feature will be installed on local hard drive.

8 Click Next.

Result: A window appears showing that the system is ready to modify the program.



9 Click Begin.

Result: A series of progress indicators appear as the system installs the database.

10 When the installation is complete, click OK, and then click Close to exit the Add/Remove Programs window, and restart the server computer.

When you finish the database installation, continue to the following procedure.

Restoring the database contents

Once you have reinstalled the database software, you must restore the database contents, either from a tape or from a remote directory, depending on which of these options you used to create the database backup.

Use one of the following procedures:

- "To restore the database from a tape backup" on page 1072
- "To restore the database from a remote directory backup" on page 1074

Then continue to the next procedure.

Performing a database integrity check

To ensure the integrity of the databases after you restore them, Nortel recommends that you perform a database integrity check. This step is highly recommended to capture any database consistency problems.

For instructions, see "Performing a Database Integrity Check" on page 1116 of Chapter 21, "Using server utilities." Then continue to the next procedure.

Configuring the system's software and database

Import configuration data from your Platform Recovery Disk to restore the configuration of your server software and database.

For instructions, see "Configuring your system's software and database by importing configuration data from the Platform Recovery Disk" on page 1077. Then continue to the next procedure.

Run the server configuration utility to configure your Symposium Call Center Server. See "To install the product software and database" on page 852 for details.

Additional steps required for servers in a networking environment

If you just recovered either an NCC server or a server that is connected to an NCC server for networking, you must perform some additional steps.

If you recover an NCC server	using the Configuration (nbconfig) utility on the NCC server, add all of the sites in your multi-site call center.
If you recover a nodal server connected to an NCC server	using the Configuration (nbconfig) utility on the NCC server, perform a force synchronization of the Address Table for all of the sites in your multi-site call center.

For more information, refer to the *Network Control Center Administrator's Guide* (see the section titled "Configuring the communications database").

Common recovery procedures used in this guide

Introduction

This section contains recovery procedures that are used in more than one recovery scenario. Refer to this section for specific restore procedures that are referenced from other sections in this chapter.

Importing database information from a Platform Recovery Disk

This procedure imports database information from a Platform Recovery Disk into your Symposium Call Center Server or Network Control Center.

To import database information from the Platform Recovery Disk

1 Log on to the server as **Administrator** or **NGenSys**.

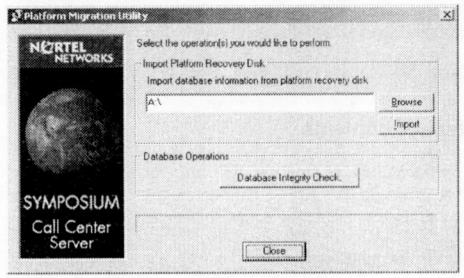
2 Do one of the following:

a. If your Platform Recovery Disk is on a floppy disk, insert it into drive A.

b. If your Platform Recovery Disk is in a directory on a remote computer, map a network drive to that directory.

3 From the Windows Start menu, choose Programs → Symposium Call Center Server → Migration.

Result: The Platform Migration Utility window appears.

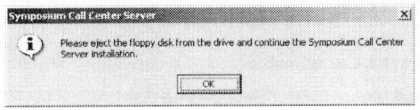


4 In the section Import database information from platform recovery disk section, do one of the following:

- If your Platform Recovery Disk is on a floppy disk:
  - **a.** Make sure the drive shown is A:\.
  - **b.** Insert the floppy disk into the drive.
- If your Platform Recovery Disk is on a remote directory:
  - **a.** Click Browse and navigate to the mapped drive for the remote directory.
  - **b.** Click the drive, and then click OK.
  - **c.** Make sure the mapped drive appears in the Platform Migration Utility window.

5 Click Import.

Result: The system imports the files from your Platform Recovery Disk. A DOS window appears during the import with the text `Importing database information.` When the import is done, the DOS window displays the following confirmation message:



6 Click OK.

7 Close the Platform Migration Utility window.

8 If you used a floppy disk, remove it from the drive.

9 Return to the procedure that referenced this procedure.

Restoring a system's database from tape or from a remote directory

These procedures restore a database backup from either a tape or from a remote directory. Use one of following procedures.

Notes:

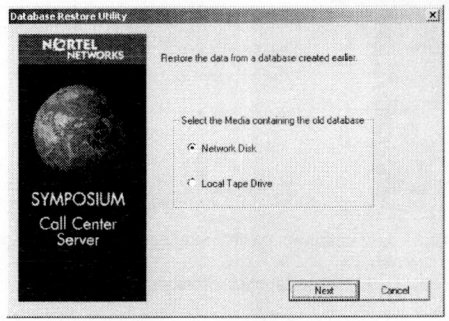
- For a listing of the variables that can affect the speed of your backup and restore, see "Variables affecting backup and restore speed" on page 996.
- To see sample time measurements for tape backup and restore, see "Benchmark statistics for tape backup and restore" on page 999.

To restore the database from a tape backup

1 Log on to the server as **NGenSys**.

2 From the Windows Start menu, choose Programs → Symposium Call Center Server → Database Restore.

Result: The Database Restore Utility window appears.



3 Select Local Tape Disk, and then click OK.

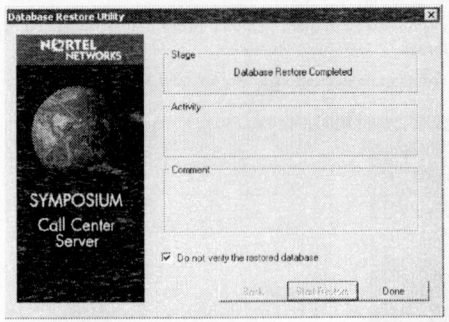
Result: The following window appears.

4 Insert the tape containing the database backup.

5 When the tape in the drive stops moving, click Start Restore to begin the database restore process.

Result: The system first shuts down the Symposium Call Center Server services that you have installed. Then the database restore process begins. This can take at least 1 to 3 hours, depending on the amount of data. During this time, the Database Restore window remains visible and displays numerous status messages about the progress of the restore.

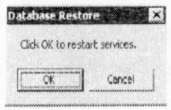
6 Wait until the following message appears:



Note: A log file is created with the following path name after the database restore is completed:
D:\Nortel\data\backup\RestoreLogs\restore.log

7 Click Done.

Result: The following window appears:



8 Eject the backup tape from the tape drive.

9 Click OK to exit the Database Restore utility. You must wait for the Database Restore window to disappear. It may seem like there is no activity, but the system must complete its processes and close this window. This can take up to 2 minutes to complete. *Do not* restart the system.

10 Return to the procedure that referenced this procedure.

To restore the database from a remote directory backup

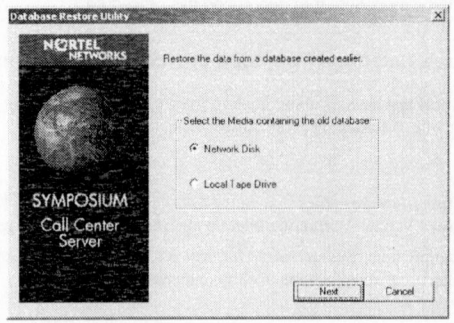
ATTENTION Before restoring your database from a remote directory, check your remote folder configuration by following the guidelines listed in the section "Testing the remote directory backup and restore configuration" on page 1026.

1 Log on to the system as **NGenSys**.

2 Ensure that you have a network connection to the computer containing the remote directory backup.

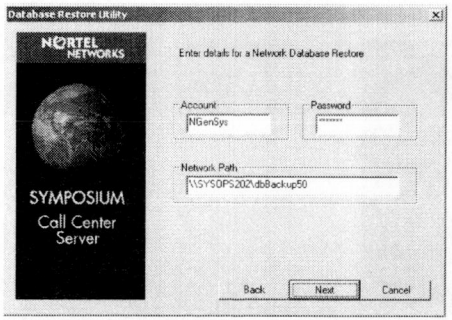
3 From the Windows Start menu, choose Programs → Symposium Call Center Server → Database Restore.

Result: The Database Restore Utility window appears.



4 Make sure Network Disk is selected, and then click Next.

Result: The following window appears.



5 Enter the account name for the remote backup location.

6 Enter the password for the remote backup location.

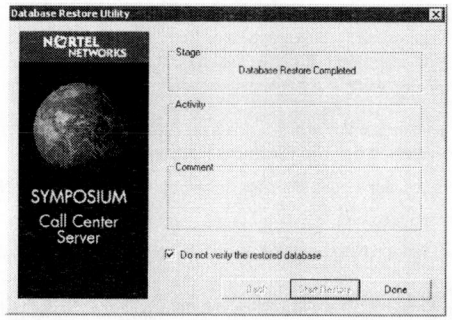
7 Enter the path of the remote backup location.

8 Click Start Restore to begin the database restore process.

Result: The database restore process begins. This can take at least 1 to 3 hours, depending on the amount of data and the CPU speed of the server. During this time, the Database Restore Utility window remains in view and displays numerous status messages about the progress of the restore.

Note: The restore can take longer if you store your call-by-call records for longer than the recommended interval.

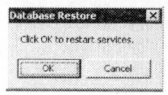
9 Wait until the following window appears, indicating that the restore is complete:



Note: A log file with the following path name is created after the database restore is completed:
D:\Nortel\data\backup\RestoreLogs\restore.log

10 Click Done.

Result: The following window appears:



11 Click OK to exit the Database Restore utility. You must wait for the Database Restore Utility window to disappear. It may seem as if there is no activity, but the system must complete its processes and close this window. This can take up to 2 minutes to complete.

Nortel recommends that you do not restart the server at this time. (You need not restart the server until after you configure the server software and database.) Instead, continue to the next procedure to perform a database integrity check.

12 Return to the procedure that referenced this procedure.

Configuring your system's software and database by importing configuration data from the Platform Recovery Disk

The file MigInfo.txt on your Platform Recovery Disk contains all configuration data for your Symposium Call Center Server. To configure your server software and database, you can import this information directly into the Server Setup Configuration Utility using a command, as described in the following procedure.

To configure your server's software and database by importing configuration data from the Platform Recovery Disk

1 Make sure you are logged on to the server as **Administrator** or **NGenSys**.

2 Do one of the following:

- If your Platform Recovery Disk is on a floppy disk, insert it into the floppy drive.
- If your Platform Recovery Disk is in a remote directory, map a network drive to the remote directory.

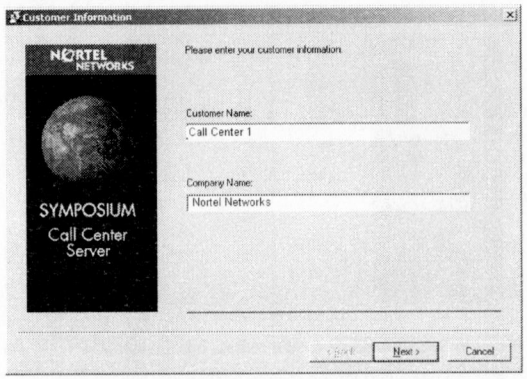
3 From the Start menu, choose Run.

4 Do one of the following

- If your Platform Recovery Disk is on a floppy disk, type **d:\nortel\iccm\bin\svrconfig.exe -i -w a:\MigInfo.txt**.
- If your Platform Recovery Disk is in a remote directory, type **d:\nortel\iccm\bin\svrconfig.exe -i -w *x*:\MigInfo.txt**, where *x* is the letter of the mapped remote directory.

5 Click OK.

Result: The Customer Information window appears.



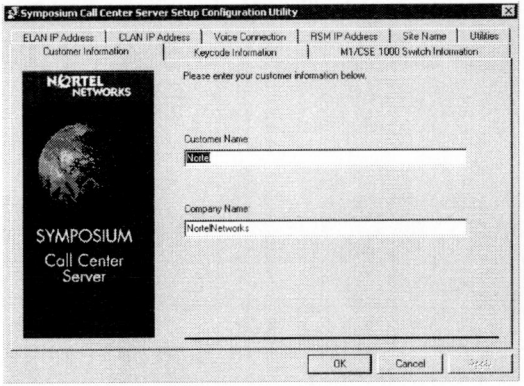
This is the first of several windows in the Setup Configuration Utility into which you enter your system configuration. However, because you have imported your Platform Recovery Disk, each window in this utility is already filled with the original system's configuration data, as in the example above.

6 Check the information in the Customer Information window, and then click Next to move to the next window.

7 Check the information in each subsequent window, and then click Next to move through the configuration utility.

8 When you reach the Site Name window, check the data, and then click Finish.

Result: The Server Setup Configuration Utility window appears. Each tab represents a window that you just viewed.



9 When you are satisfied with the configuration details, click OK.

Result: A window appears asking you to verify your keycode information.

10 Check that the features listed match the product you purchased, and then do one of the following:

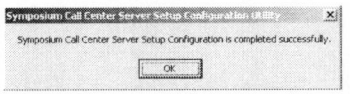
- If the information is not correct, you may have entered the keycode and serial/dongle number incorrectly.
  - **a.** Click No.
  - **b.** Click the Keycode Information tab and make any necessary changes to your entries.
  - **c.** Click OK, and then repeat step 9.

- If the information is correct, click Yes to continue.

Result: The Server Configuration Utility configures your server using the data you entered. It displays a status of each stage that the configuration passes through.

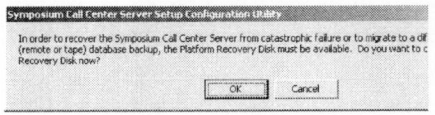
Note: This process can take 20 to 30 minutes to complete, depending on your system's CPU and database size. Do not close any windows during the configuration.

11 Wait until you see the following message:



12 Click OK.

Result: The following message appears:



13 Click OK.

Note: If you click Cancel, remember to use the Migration utility to create a Platform Recovery Disk when the installation is complete. Skip to the Result in step 18.

Result: The Utilities tab appears.

14 In the Create Platform Recovery Disk section, do one of the following:

- To save the Platform Recovery Disk to a floppy disk:
  a. Insert a blank floppy disk in drive A.
  b. Click Create Disk.

     Result: The following message appears:

  c. Click OK.